RR

UNIVERSITY
OF MICHIGAN
SEP 8 1953
ENGINEERING
LIBRARY

Advanced Management

contributor to orderly progress

AUGUST
1953

VOL. XVIII NO. 8

In This Issue . . .

Management and Union's Meeting Ground . . .

Some Methods to Management Improvement . . .

Measuring the Management-Labor Gap . . .

How Design Raises Sales, Lowers Costs . . .

see Table of Contents page 3

SOCIETY FOR ADVANCEMENT OF MANAGEMENT

The Pioneer in Management Philosophy

Remington Rand Methods News

With Transcopy, one unit does the whole job — exposes, develops and prints.

Photocopies in Seconds, Made in Your Own Plant

How many dozens—or hundreds—of times have you wished you could have a copy of needed data *immediately*, without waiting for it to be typed or traced or sent to an outside service for photocopying? Now you can have photocopies in seconds, made right on your own premises, of customer orders, bills of material, drawings, etc., by either of these two methods:

One! Transcopy Duplex

A single-unit machine, Transcopy Duplex, does the complete job of exposing, developing and printing photocopies, and does it all in a matter of seconds. No darkroom needed, no running water—you can use it anywhere, move it anywhere. "Installation" is merely a matter of plugging it into any standard electrical outlet. You get perfect, ready-to-use, positive prints up to 14½ inches wide and of any length. And there's no trick to it. Anyone can learn the simple Transcopy Duplex operation in a few minutes and be an expert from there on. Interested? Just mark **(P-344)** on the coupon for free folder.

Two! Portagraph, Transcopy

If you now have a Remington Rand Portagraph or other device for exposing photocopies, there's a second Transcopy model that will team up with it to save time on the total job and eliminate messy, space-wasting developing equipment. Many users have chosen this combination of equipment because Portagraph can copy from opened booklets, pamphlets, etc., making it unnecessary to detach individual sheets. Ask for folder **P-334.**

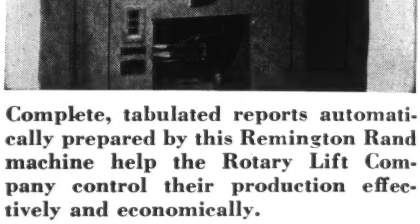
ATT'N: PURCHASING DEPT.

Thousands of copies of Remington Rand's authoritative, fact-packed manual "Purchasing Procedures" have already been furnished to factory executives responsible for or interested in efficient procurement procedures. Would *you* like a free copy? One or more of the scores of ideas presented may be just what you've been needing to speed up paperwork routines and establish closer control. Ask for **X-1202.**

"Tailor-Made" Production Control With Firm—But Flexible—New Methods

Your production problems may very well be similar, overall or in part, to those of The Rotary Lift Company, Memphis, Tennessee. Some of their products, including hydraulic auto lifts, are reasonably standard. But most of their production consists of devices made to highly individualized customer specifications.

With all the variables encountered in manufacturing complex mechanisms on a one-of-a-kind basis, you might think it would be practically impossible to maintain a firm, effective system of production control . . . one that could assure economical coordination of manpower, machines and materials on every order going through the factory.



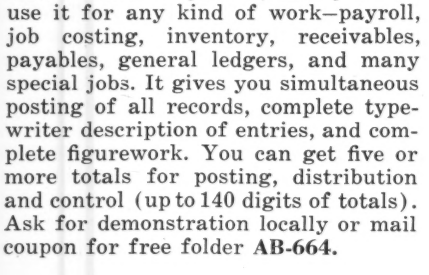
Complete, tabulated reports automatically prepared by this Remington Rand machine help the Rotary Lift Company control their production effectively and economically.

A workable system was found, however, in a combination of Remington Rand methods and equipment. Punched cards are utilized for high speed preparation of payrolls, and as a by-product, material and labor distribution. In addition they permit rapid, mechanical tabulation of reports valuable to Production, Purchasing Engineering, Accounting and Management executives. Facts on which to base decisions are now available in a fraction of the time previously required.

Tied right in with the Remington Rand punched-card systems are two Remington Rand visible record systems. One of these uses punched cards as inserts in Sched-U-Graph control boards for visible charting of machine loading. Job assignments and changes in schedule are made quickly, easily, with virtually no possibility of oversight or error.

Kardex, another visible system, provides for convenient recording of information supplied by punched-card Material Requisitions, and maintains an effective perpetual inventory control.

The systems flexibility you need in controlling complex, "tailor-made" production, can certainly be found in adaptations of the punched-card principle, visible record principle, or both, depending on the nature and scope of your factory operations. Remington Rand production control specialists will be glad to make specific suggestions without obligating you in any way, whenever you're ready. But in the meantime, why not read the detailed story on the Rotary Lift Company's complete, coordinated system? Mail the coupon for free copy of **CR 801.**



It's Here! A Completely Descriptive, Low-Priced Bookkeeping Machine

Now, for about one-third the price you'd have had to pay for a "big" descriptive bookkeeping machine, you can have the same, basic time and work-saving advantages. It's a simple machine, easy to operate with its touch-method keyboard, and you can use it for any kind of work—payroll, job costing, inventory, receivables, payables, general ledgers, and many special jobs. It gives you simultaneous posting of all records, complete typewriter description of entries, and complete figurework. You can get five or more totals for posting, distribution and control (up to 140 digits of totals). Ask for demonstration locally or mail coupon for free folder **AB-664.**

PROFIT-BUILDING ***IDEAS*** FOR BUSINESS

Remington Rand INC

Management Controls Reference Library, Room 1023, 315 Fourth Ave., New York 10

Free literature, please, as marked below:

AB-664 CR-801 P-334
P-344 X-1202

Name _____ Position _____

Company _____

Address _____

City _____ Zone _____ State _____

1-13

Advanced Management

AUGUST 1953
VOLUME XVIII NO. 8

combined with MODERN MANAGEMENT

Publisher: C. A. Slocum
Editor: Will Long

Production Editor ..... Gary A. Lewis
Editorial Assistant ..... Mary E. Cawthon
Consulting Editor ..... Edward Schulz
Research Editor ..... Dr. Vincent A. Flynn
Assistant Research Editor ..... Jane H. Schotland
Advertising Counsel ..... Frank E. Fehlman

PUBLICATIONS COMMITTEE

JAMES J. BAMBRICK, JR., *Labor Relations Specialist, National Industrial Conference Board, 247 Park Avenue, New York, N. Y.*

MRS. WALLACE CLARK, *2 Fifth Avenue, New York, N. Y.*

DON F. COPELL, *Vice President, Engineering and Personnel Training, Wagner Baking Corporation, Newark, N. J.*

FRANK FEHLMAN, *110 E. 42nd Street, New York, N. Y.*

L. C. MORROW, *Director, Special Editorial Services, McGraw-Hill Publishing Company, New York, N. Y.*

AL N. SEARES, *Vice President, Remington Rand, Inc., New York, N. Y.*

ORDWAY TEAD, *Editor of Social and Economic Books, Harper & Brothers, New York, N. Y.*

Consultant to the Committee—ROBERT I. MILLER, *Assistant Secretary, Curtis Publishing Company, Philadelphia, Pa.*

NATIONAL OFFICERS: 1953-1954

President—BRUCE PAYNE, *President, Bruce Payne & Associates, Inc., Westport, Conn.*

Executive Vice President—GEORGE B. ESTES, *Assistant Works Manager, Seeger Refrigerator Company, Evansville, Ind.*

Secretary—J. BRUCE MCNAUGHTON, *Industrial Engineer, The Jeffrey Manufacturing Company, Columbus, Ohio*

Treasurer—JOHN B. JOYNT, *Manager, Administrative Engineering, American Enka Corporation, Enka, So. Carolina*

Director-at-Large—EDWARD W. JOCHIM, *General Manager, Chicago Plant, and Member of the Board of Directors, Personal Products Corporation, Chicago, Ill.*

Executive Director—C. A. SLOCUM

Vice President. Management Research and Development—RALPH C. DAVIS, *Management Counsel, Columbus, Ohio*

Vice President, Student Chapter Operations and Development—RALPH L. JACOBS, *Management Consultant, Cincinnati, Ohio*

Vice President, Chapter Operations—LOUIS ARTHUR LUKENBILL, *Industrial Engineer, The Link Belt Company, Indianapolis, Ind.*

Vice President, Membership—HAROLD FISCHER, *Professor of Business Administration, Franklin & Marshall College, Lancaster, Pa.*

Vice President, North Central Region—RUSSELL L. MOBERLY, *Professor of Commerce, University of Wisconsin, Madison, Wisc.*

Vice President, Southeastern Region—RHETT BALL, *Vice President, Bruce Payne & Associates, Inc., Atlanta, Ga.*

ADVANCED MANAGEMENT, published monthly by Society for Advancement of Management, 74 Fifth Avenue, New York 11, N. Y., is merged with MODERN MANAGEMENT, and is successor to The Society for the Advancement of Management Journal, the Bulletin of the Taylor Society and of The Society of Industrial Engineers. Re-entered as second-class matter, December 23, 1949, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright, 1953, Society for Advancement of Management. Subscription rate: $8.00 per year. Single copies: 75 cents (members); $1.00 (non-members). An index to ADVANCED MANAGEMENT is published annually, and the contents are also indexed in *Industrial Arts Index* which is available at Public Libraries. Notification of address changes must be given four weeks in advance.

CONTENTS

Executive Training and SAM 4
by Bruce Payne, President, SAM

Management and Union's Common Meeting Ground 5
by W. V. Owen

A Design Formula Based on Function 7
by Henry Dreyfuss

Measuring the Management-Labor Gap 10
by Wendell M. Patton

A Test Analysis of Time Study Men 13
by Charles A. Thomas

Improvement: Management's Great Goal 19
by John B. Joynt

A Morale Audit for Supervisors 23
by B. N. Taylor

Advanced Management Reports 27

Plant Layout and Material Handling 28
symposium by Richard Muther

CIPM Reports 30

The Management Bookshelf 31

DISCLAIMER: Every effort is made to verify the information published in ADVANCED MANAGEMENT. The opinions of the authors, however, are not necessarily the opinions of the Society and this periodical accepts no responsibility in connection with any liability which might develop as a result of articles published. All unsolicited articles, manuscripts, letters, and pictures sent to ADVANCED MANAGEMENT are sent at the owner's risk, and ADVANCED MANAGEMENT expressly repudiates any liability or responsibility for their safe custody or return.

Executive Training And SAM

THE objective of every company is to operate with top effectiveness. To meet this goal requires a competent team of executives, supervisors, and technicians who can give the company modern methods and the flexibility to anticipate change, plus reserve power to meet new developments. This team must be maintained and improved on a continuing basis if a company is to stay in front of competition.

Perhaps some executives and supervisors are born. Most have to be made. They need training in effective methods of leadership and in coordination of the work of others. A "school for policy makers" may seem strange. But it is needed in most companies, in every kind of business and industry. It is the best way to help key men to discover, without friction, hard feeling, and resentment, exactly where their responsibilities begin and end. And perhaps more important, they come to know the scope of their fellow executives' duties.

An executive training course is particularly important for men entering the executive group—such as technicians who are promoted to an executive staff.

The case method has been successfully used in executive training programs. Many companies which have tried the case method have been enthusiastic. The "graduates" for the most part agree that their horizons have been broadened; their sympathies enlarged by looking at the other fellow's point of view. They have a new sense of the importance of persuading people to work with them rather than for them.

The successful use of Harvard Business School case histories by our SAM Chapters can be judged by their continued use at round table discussions — 31 Chapters in 1952-53. It may not be long before all of our 57 Chapters will find business case study advantageous and important to our members.*

Business will find in SAM an organization of Chapters already prepared to assist companies with their executive training. An effective executive team can be maintained and improved on a continuing basis—by its participation in a Chapter's round table meetings, with business cases as focal points of discussion. The cases can stimulate the general executive as well as those interested in the specific areas of human relations, administrative controls, production, distribution and finance.

Through case study and other participation by members, the Society will continue to pioneer in the advancement of management.

Bruce Payne, President, SAM

*New sets of cases are being selected by a committee and will be available to chapters through the National Office for the next year's work.

Management and Union's Meeting Ground; The Opportunity-Security Question

by W. V. Owen

Advantages of opportunity over security is one of management's sturdiest arguments in management-union controversy. Today both union and management men have come to realize that the best path to a smooth business operation lies in some middle ground. Here the different arguments are detailed both from the viewpoint of management and union, to give management men a clearer understanding of their problem.

THE general proposition that organized rank-and-file employees look to the union for security and to management for opportunity stems from the respective functions performed by unions as contrasted with the functions performed by management. Unions sponsor seniority rules and prosecute grievances. Many grievances have to do with what the employee regards as a threat to his job or status security. Management on the other hand is concerned with the creation and expansion of job opportunities. Promotions and transfers are generally initiated by management.

Security of the worker includes the three aspects: economic security, psychological security, and physical security. Loss of job is a threat to a worker's economic security, failure to adjust to a changing environment may be costly to one's psychological security, disease and accident threaten one's physical security. It is sometimes argued that security is merely an attitude or state of mind. A person with no fear of economic insecurity will not regard being laid off as a threat to his security.

But whatever the feelings of workers toward job security may be, the stability of the economy depends upon stability of employment. The dependence of general economic stability on job security becomes more significant as our economy shifts from an agricultural economy to an industrial economy.

We speak of great opportunities existing in one company, as contrasted with other industrial firms. Opportunities to do what? To advance, to earn more, to learn more, to assume more responsibilities, to share in policy working, or to improve one's social or professional reputation. Many employees may seek the opportunity to be free from responsibilities, to be demoted to an "easier" job even though the easier job pays less than the higher level job. Small organizations probably offer more opportunities than do large organizations for an employee "to get acquainted" and to gain more of a feeling of belonging to the institution with which he is associated.

Opportunity is generally associated with the changes that come about with institutional growth, reorganization, and technological improvements and changes in administration. However, change probably means that some employees will benefit from the change, other employees will feel no effect from the change, while others will suffer economic and/or psychological loss.

Opportunities fall into two broad related categories. The first category includes opportunities created by political, economic, and social changes such as an increase in the population, war, or peace. The second category would include those changes brought about by man's initiative, ingenuity, and energy, such as technological change, discoveries of new land, and new methods. Opportunities often deal with future probabilities. After a predicted opportunity has been realized, the opportunity itself has gone. Opportunities, then, act as a motivating force to employees, and are actually prospects that vanish when realized.

Broadly, when an employee speaks of greater opportunities, he probably means that according to his subjective judgment the chances are better that he will gain more satisfaction from one set of circumstances that he would gain from another.

How Security, Opportunity Are Related

Change, but especially violent change, such as moving from a condition of peace to a condition of war, creates many new opportunities, but at the same time creates a social state of great insecurity. The opportunities for new and different employment, higher wages and salaries, travel at the expense of the

employer are some of the opportunities created by war. The risk of having "non-essential" industries closed, the interruptions in normal peace-time living, and the risk of property destruction and war casualties weaken the bonds of security. On the other hand realizing the opportunity to acquire a rank that carries tenure (professorial rank for example) illustrates a case where opportunity reinforces security. The football coach can be cited as an example of a high level opportunity for fame and perhaps riches combined with a low level of security.

It is difficult to visualize an employee who deliberately selects a job with little security for the sake of insecurity. Since new opportunities often are found in new and speculative industries or on the frontier of old industries, it is generally thought that jobs "with a future" are less secure than the old established jobs. Young men seem to be attracted to new industries, such as television or air transportation. There is a great variation in terms of security and opportunity from job to job and on the same job from time to time. Some jobs carry a minimum of security and also a minimum of opportunity, extra labor being an example. Other jobs are high in security and low in opportunity, many civil service jobs are often thought of as being jobs with high security and low opportunity.

Current Emphasis of Union Thinking

The thinking that relates the union more with security than with opportunity is that the political interests of the union direct its leadership primarily toward the welfare of the majority of the rank-and-file. Since opportunities for promotion are infrequent for perhaps eighty per cent of the union membership (but security of job is possible for a large majority of workers) the union promotes the cause of security rather than the cause of opportunity. The common rule and group philosophy is also in greater harmony with the principle of security than with the principle of opportunity. When opportunity for new and better jobs arise, the selection of the persons for those jobs may cause strife and friction between those who are selected and those who are not. It may be better for the internal harmony of the union to have management do the selecting, with management assuming the responsibility for any unpopular selections. From the union's point of view the problem of selection is taken care of by seniority rules which have become the traditional way of selecting individuals to benefit from new opportunities.

The current emphasis of unions on the guaranteed annual wage would support the view that union leadership gives priority to questions of security rather than opportunity. Welfare plans including pensions and sick benefits advanced by organized labor further supports the contention that unions are oriented toward security. Union members who have economic security are better union members from the dues standpoint. Organized labor's traditional opposition to technological change can be cited as evidence that unionism is primarily concerned with security.

This does not mean that organized labor is opposed to an expanding economy or to more and better jobs, but rather that the rank and file worker is first concerned with a steady job with the risks of injury, break in employment, and illness taken care of, in part at least, by some kind of insurance. Security is for the many, the fruits of opportunity for the few.

The union itself provides opportunities for leadership. The political process of selecting union leadership discovers many persons who have the necessary ability. Union leaders frequently move from the relatively narrow field of union politics to that of national politics.

Those who believe that management is primarily concerned with providing opportunity for employees point out that management is chiefly engaged in finding more effective means of operating a given business unit, and also in growth and expansion. Being interested in improving methods and in expansion, management must become interested in the discovery, selection, and training of personnel to propel and guide new methods and new enterprises.

Granting the validity of management's orientation toward opportunity, it is nevertheless true that management is interested in a stabilized labor force. And a stabilized labor force promotes and protects the cause of security. Several firms have made considerable progress in stabilizing employment by leveling off seasonal demands and stimulating the out-of-season demand for their respective products. Stabilization of employment has had success in soap, automobile, and meat-packing industries.

Both Have Same Problem

Although unions symbolize the cause of security, and management is active in promoting opportunities for a relatively few employees; the security function is not exclusively the function of organized labor nor is opportunity to be offered only by management. Unions are interested in both security and opportunity just as management is concerned with both opportunity and security. Security itself may be expressed in terms of opportunity.

The problem facing both union leadership and management is not one of respective jurisdictions over security and opportunity, but rather one of discovering the optimum of equilibrium between security and opportunity for the mutual welfare and success of both. A firm that has moved too far toward security becomes stagnant, while a firm that has what seems to be many opportunities may be and probably is unstable.

The relatively few "favorite sons" are more oriented toward management than they are toward labor. In the eyes of many the mark of success is the mark of an administrative title. Management personnel and prospective management personnel represent a minority group as contrasted with the majority group of hourly paid workers. It may be that management and the satellites of management think as a minority group thinks. Minority groups tend to feel insecure and be sensitive to criticism.

This can present a difficult and delicate social and psychological problem, a dilemma of two realities. One reality is the need for cooperation between the minority of administration and the majority of non-administrative employees. The other reality is the inequality of power, prestige, status and income that exists between the two groups and tends to drive them in opposite directions. Any managerial policy, or any union policy that tends to widen this gap does a deep disservice to the organization concerned.

Very little, if any, gains were made in total union membership in 1952. In the first six months of 1952 no-union ballots in elections conducted by the National Labor Relations Board won in 32% of the cases compared with 28% during the previous year. . . .

from Labour Unions, Union Membership; the Union Shop Issue, Encyclopedia Brittanica's Book of the Year, 1953.

Form Follows Function: A Design Formula Aids Sales, Public Relations, Helps Lower Costs

by Henry Dreyfuss

This is an article about industrial design by an internationally famous designer. It relates modern design to business management, giving a complete panorama of the ways in which today's designers work as part of the team that includes management, explaining development from the first primitive man's clay cup to the part modern design plays in saving operating costs per flight by attention to such details as the proper choice of airplane upholstery.

If Leonardo da Vinci were alive today, he would be amazed by our thousand-mile-an-hour airplanes. But he was not a reticent man and his astonishment would be tempered by his pride at seeing his own prophetic vision come true. It's likely he would sit right down and doodle a design for the airplane of the year 2389, the same distance in years from 1953 as was Leonardo's flying machine sketched in 1517.

Suppose Leonardo in this twenty-four hours of hypothetical reincarnation could see some of the things we take for granted—the small black instrument which summons anyone anywhere for a private conversation; the magic box which by the turn of a switch produces authentic pictures and sounds; an immense eye which looks into the heavens; a glass bulb which emits light; a self-propelled conveyance available to everyone.

One wonders how the brash, imaginative Leonardo would react to these things. and if he would conceive a way to make them better. Then as one reorients history, one realizes with a shock that Leonardo da Vinci was a contemporary of Christopher Columbus and that while one perilously crossed the sea in small, frail ships to America to find only a wilderness inhabited by savages, the other was drawing sketches of a flying machine.

Despite Leonardo's impact, he was by no means the first industrial designer. A shadowy figure preceded him by thousands of years—a prehistoric man, wanting a drink of water and dipping his cupped hands into a pool. Some of the water leaked through his fingers, but it was the only way he knew to get a drink.

In time he learned to fashion a bowl from clay. Later, his descendants molded the soft clay, then discovered how to attach a handle, creating a cup, and how to pinch the rim at one point to make a spout, creating a pitcher. A wide variety of such containers may be seen today in museums. They are crudely made but pure in form and useful.

Growth of Designs Fundamental Formula

In a vague, instinctive, half-understood way, primitive man, learning to make the bowl and the cup, was impelled by an urge for improvement in terms of convenience. He was making a bowl to use. He was untroubled by the fact that it may have appeared coarse and irregular. The important thing was that he could hold it and it didn't leak. Inadvertently, he was putting into practice in its purest sense an axiom coined centuries later by Louis Sullivan, the pioneer of modern architecture, that Form Follows Function—the lines of a well-designed object should derive from the service it performs.

The industrial designer agrees with Louis Sullivan that form should follow function but he insists on determining first if the function is perfect. A modern vacuum cleaner is a certain shape and weight because exhaustive tests have proved it works better, is easier to manipulate than if it were otherwise. Stand back a few feet and study a modern vacuum cleaner for a moment. Compare it mentally with the ungainly, inefficient one your grandmother used. It has not been prettified. Its clean lines were dictated by its greater efficiency.

Another milestone in industrial design occured in 1847 when Henry Cole, an Englishman, raised an outcry against the lack of common sense and clean design in the mass-produced products of his time. "Manufacturers," he wrote, "must produce in each article superior utility and select pure forms." Cole, incidentally, designed a mass-produced china tea service that is still made today.

Cole's crusade was kept alive in the 1870's by William Morris, whose chair remained for generations one of the few

honest examples of functional design.

Actually, primitive man's early fumblings, da Vinci's ingenuity and the protests of Cole, Morris, and others against conformity have only a faint connection with the violent, sweeping demand in this country in the last quarter century for mass-produced objects combining utility and comfort. A revolution has taken place and not everyone has understood it.

It is for the psychologists and the philosophers to determine whether this drive for something better, for more comfort and convenience, gives people a better start toward happiness or contentment. But we can all agree that increasing the safety and improving the conditions under which people live and work helps give them the setting which is more readily adaptable to such a life.

There is certainly no question that many more farmers today have all ten fingers than did a generation ago, because we put metal guards on moving parts of farm machinery. There is a tendency by some people to disparage such progress. They call it gadgetry.

But if design can help conserve a person's time, effort, and nerves, as well as prevent injury, we are doing our job. And if in so doing we happen to make an object easier on the eyes, the ears, the touch—and more marketable as well—we feel we may have given society a kind of bonus.

The industrial designer today strives for handsome surface appearance, but he never forgets that beauty is only skin deep. I like to express this philosophy as follows: "The designer has always in mind that the object he is working on is going to be ridden in, sat upon, looked at, talked into, activated, operated, or in some way used by people individually or en masse. If the point of contact between the product and the people becomes a point of friction, then the designer has failed. If, on the other hand, people are made safer, more comfortable, more desirous of purchase, more efficient—or just plain happier by contact with the product—the designer has succeeded."

The industrial designer began by eliminating excess decorations, but his real job began when he insisted on dissecting the commodity, seeing what made it tick, devising means of making it tick better—then making it look better.

The competent designer today brings to this task a detached, analytical point of view. He consults closely with the manufacturer and his workmen and his sales staff, keeping in mind whatever peculiar problems the firm may have in the business or industrial world, but he preserves his autonomy. He refuses to budge on design principles he knows to be sound. He may lose an occasional client but he rarely loses the client's respect.

After many years of trial and error, we have developed a formula which we apply to every design problem:

1. Convenience of use, and safety.
2. Ease of maintenance.
3. Cost of manufacture.
4. Sales appeal.
5. Appearance.

It might seem to some that the modern designers lay claim to a special infallibility through which they blithely presume to offer a solution to any problem. A good designer makes no such claim. He takes a modest pride in a skill based on experience and an alertness which is sometimes interpreted as vision. He approaches every problem with a willingness to do painstaking study and research and to perform exhaustive experimentation. He is equipped to work intelligently in architecture, machinery, electronics, interior decoration, physics, color, and human anatomy. He must know how far to go and when to stop. He must be part engineer, part salesman, part public relations man, part artist.

What Good Design Has Done for Business

Businessmen may say that history is all very well, but just what has industrial design done for American business in practical matters such as profits, sales, costs, efficiency?

As human beings as well as businessmen, you may ask what industrial design has contributed to the well-being of the American people.

First, let's take the question of profits. Young though it is, the profession of industrial design has reached maturity in the facts of business life. Today's designer can read a balance sheet as easily as he reads his morning paper. The industrial designer clearly realizes that he must contribute to his client's profit picture or there will be no room for him. Today's designer must have vision, but he can't be visionary. Today's industrial designer is a practical man, as keenly attuned to profit and loss as the company's comptroller. How is this laudable attitude translated into results?

One way is the contribution which good industrial design makes to lower costs. The designer knows that no matter how many splendid characteristics he may have designed into a given product, that product must be manufactured at a cost which permits sale at a profit. He simplifies the product or the process of its manufacture; he seeks out new materials to reduce weight; he removes useless, costly ornamentation.

Our office is always weight conscious, but when we were engaged by the Lockheed Aircraft Corporation to design the interiors for the new Super Constellation this consciousness was heightened to the nth degree. We discovered that every pound of weight we could save on that aircraft meant a total of $2065 in added revenues to the operator over an estimated 15-year life of the plane! We combed the market for new materials, so that every bit of fabric, every nut, every bolt was chosen with weight in mind.

Sometimes the designer wins a victory in this endless cost battle without actually effecting any material saving. A case that comes to mind is a deep well turbine pump which we redesigned for the Byron Jackson Company. The pump turned out to be pleasing in line and color, but more important, increased efficiency was developed. An oil storage tank, which formerly hung outside the unit, was relocated and integrated into the base casting in close contact with the discharge water. As a result, the oil is now kept at a constant temperature and a steadier rate of flow is assured. The net result costwise was that the redesigned pump cost the manufacturer about two cents less than its predecessor. The point here is not the two cents, a tiny sum in comparison to the total cost of the product. The design victory lay in the fact that the new pump was a better, more efficient mechanism *at no extra cost*. In other words, good design made it possible for the manufacturer to deliver a better value without exacting a higher price from the buyer.

Designers Approach to Volume Sales

There is an obvious but sometimes overlooked business equation which can be expressed:

Low costs + volume sales = profits.

Design helps balance this equation. Good industrial design is a silent salesman, an unwritten advertisement, an unspoken commercial.

Let me illustrate the point. Suppose you are a manufacturer of alarm clocks. You make an accurate, dependable timepiece. But so do your competitors. You and your competitors likewise are on

about the same level when it comes to the effectiveness and extent of your advertising and merchandising methods. Your prices are the same.

Which clock will the customer buy from a shelf full of clocks at the point of sale? Here the work of the industrial designer can decisively influence the decision. He has made one clock's face more legible; he has fashioned a winding key that is less likely to break a woman's long fingernails; he has made the clock pleasing in line and color; he has made it reflect the efficiency and accuracy of its mechanism and the integrity of its maker. The chosen clock runs no more faithfully than the others, won't last a day longer. But by giving it the elements which add up to "sales appeal" the designer has sold it over competition.

On this subject of sales, I'd like to remind you of the five-point design yardstick I mentioned awhile ago. I submit that these five points actually constitute a valid sales yardstick, too. If the product is convenient and safe to use, easy to maintain, reasonably priced from the standpoint of the consumer *and* the manufacturer, possesses sales appeal, and is good to look at—then a big part of the selling job is done.

Good Design Means Better Public Relations

So far I have been discussing sales in terms of consumer goods. But the subject is far broader than that. The Bell Laboratories, for instance, have no consumer sales problem in the accepted sense of the term. By and large, if you want a telephone you get the one the Bell System offers or you don't get one at all. Yet our office has been retained by Bell for over twenty years. It's one of the things of which we are most proud. But why? Well, the answer in part is still salesmanship, even in a noncompetitive field. The Bell people could never have succeeded in building their great industry without a keen public relations sense. They know that you will be pleased (subconsciously, perhaps) when you pick up the new telephone and find that the wider handle section of the handset prevents rotation in your hand; that you will like the new dial, with its letters and numerals on the outside of the rotating finger wheel, because these things increase visibility in dialing as well as making for faster dialing time.

Even less competitive than the Bell system is the Government of the United States, particularly the Armed Forces of the Government. The Selective Service people are hardly under the same compulsion to vie for attention as is an automobile manufacturer. Yet the Army, the Navy, and the Air Force have sought out the services of industrial designers. Why? One answer is the word "liveability" which appears in a contract we have with the Navy Department under which we are rearranging the crew's quarters on a class of destroyers. Another answer lies in the fact that the Army has found that soldiers take greater pride in, and better care of, arms and equipment that is well designed and looks like what it *does*.

"Protection" and "safety" are key words, too. Not simply protection from enemy fire, but protection from the risks inherent in operating one's own equipment. Safety features designed into American guns and ships and airplanes have prevented countless casualties.

Timing Is A Part of Good Design

The industrial designer's intense preoccupation with timing and research arises from the fact that he cannot, and his client cannot, afford a mistake. The manufacturer of alarm clocks, for instance, has turned out a million clocks before a single one actually reaches the market. Think of the economic catastrophe which would ensue if the designer misjudged in his evaluation of public taste at that particular time! A million clocks would have to be sold at distress prices. Tooling costs would be lost. Sales and advertising expense would go down the drain.

Many businessmen who should know better still haven't a clear perspective on this. In my own office we do not accept packaging assignments. On the other hand, we *do* design packages. And there is no contradiction in those statements. They are consistent with our belief that the designer should be in at the inception of the product, and then follow through each phase until it is ready for market. Even then he should be concerned with the carton it is shipped in, the truck which delivers it, and often the showroom in which it is displayed. In other words, we believe that the package is our business only if it is the logical outgrowth of the basic design of the product it covers.

In this discussion of the practical, hard-headed side of industrial design, I have touched upon profits, cost cutting, and sales—three cardinal points with which businessmen have every reason to be concerned. To complete the discussion, however, there isi still another subject which I think we could explore. An understanding of this subject will round out the picture of industrial design's function in the business world—because it has a bearing, designwise, on profits, cost cutting, and sales.

I'm talking about the designer's preoccupation with man. Not too long ago, machines were put together solely with the idea of making the machines work, and with little concern for the person who was to use and operate them. If the machine needed a control handle, one was put on without much thought as to how far the operator would have to reach for it. The modern designer puts that handle where the operator can most efficiently and safely use it, thus increasing the efficiency of the entire operation of the machine itself.

The better we understand man's physical and psychological peculiarities and limitations, the better we can reconcile man with machine; the better we can translate man's needs and desires into businesslike terms of profits, cost-cutting, and sales. No one designer's office can hope to carry forward a truly adequate study along these lines. I suggest that a serious, broad scale program should be undertaken in this whole field of anthropometrical and physiological research. A responsible agency to centralize activity related to essential data would allow greater progress in adapting designs to man's requirements and limitations. This would be, I firmly believe, a long step forward for business.

Industrial designers' preoccupation with man brings me back to the fundamental question: what has industrial design contributed to the well-being of the American people?

First, designers are part of a team, a team made up of business executives, engineers, scientists, salesmen, advertising experts.

Twenty years ago, total retail sales in the United States were in the neighborhood of $50,000,000,000. Currently they are running well over three times that amount. Many factors brought about this enormous gain. But America is by far better fed, better clothed, better situated in terms of all creature comforts and luxuries than it was twenty years ago. The level of public taste in America rose more in the past twenty years than it did in the previous two hundred. The average American, thanks to the time-and-labor-saving devices of our modern living, has more leisure, produces more with less expenditure of effort, than any citizen of any country in the world.

Measuring the Gap Between Today's Management Men and Labor

by Wendell M. Patton, Ph.D.

Today more than ever before thoughtful men in the management profession have become aware of the gap between labor and management, a dangerous cancer on the healthy growth of American industry. Here a serious author tells what steps are being taken to combat the problem, developing from two fundamental psychological starting-points the workable details that can make a plan for future action adaptable to most of the management field.

MANY FUNDAMENTAL changes have taken place in our industrial organizations during the past 50 years. Many of the changes in industry, as well as in society, are outgrowths of those social and technological changes produced by the great American industrial revolution. Such changes included the gradual expansion of markets, the increased use of machines to replace handtools, and the requirement of greater capital with which to set up shop. The net social result of these changes was that an increasing proportion of the population abandoned self-employment and clustered around the newly created manufacturing centers. This, of course, gave impetus to the already growing industry.

Within industry the productive unit continued to grow. The early proprietorship became the partnership, and finally the corporation. Absentee ownership became the rule rather than the exception. Through necessity a management and labor group evolved.

Instead of the single compact company of the late 1800's there appeared gigantic corporations with their organizations becoming more and more complex and impersonal. Many of these companies started as small organizations, founded, owned, and managed by men who had a close personal relationship with their employees. As the company grew, however, this relationship was lost. The owner was forced to employ assistants to handle various divisions of his company. The addition of each new assistant and division served to increase the gap between what was becoming known as labor and management.

Today the identity of purpose between owner and worker has been lost. It has been replaced to a large extent by conflicting interests, distrust, and open conflict. The American industrial system has become a house divided against itself with its future in grave danger.

This social-psychological gap between management and labor must be reduced if we are going to survive. There is no short-cut, no magic formula, no single, simple answer. We have a complex problem indeed, and our time is beginning to run short. We can no longer dodge the problem. It's in our laps.

A significant approach to the problem has been worked out by psychologists. It is true that by and large psychologists have not contributed as much to industry as they should have. Although they are men who by virtue of their intensive training and experience should be able to contribute a great deal, many of them have been unwilling to leave their cloistered surroundings and contaminate themselves with "applied problems". An important reason for their attitude is that management has been unwilling in most cases to invest in research, particularly personnel research, and has demanded an immediate return for every dollar spent. This has been an unfortunate situation but it appears to be changing perhaps most noticeably in the area of labor relations.

Psychologists Contribution

The ideas that follow are an example of the contribution psychologists can make. Whether or not businessmen agree with them they ought to find them interesting.

Two very fundamental factors under-

Note: This article is based on an address delivered by the author to the South Worcester County Personnel Association at Annual Management Night, in December, 1952.

lie the approach that certain psychologists have taken to the problem:

1. It is necessary first to determine the situation as it actually exists. In other words, we must first measure the gap before we can construct the bridge.

2. Each group's perception of that gap is just as important as or even more important than the gap itself. We must know how it appears to management, and we must know how it appears to labor.

The theory upon which the approach is based is not original. Several other investigators have been aware of its inherent possibilities. Remmers[1] has emphasized consistently that one of the sharper engineering tools needed today is some quantitative index of the ability of an individual "to put himself into the other fellow's shoes." And how right he is!

When union and management meet they bring into that meeting not only facts but feelings and beliefs. The union operates toward management according to the feelings and beliefs it has toward management. And management in turn is operating toward the union according to its perception of the union. Each side uses arguments which they think will influence the other side. The ironical fact is that what these groups believe about each other will influence their actions and decisions, yet these beliefs may not even closely resemble the actual situation.

All of us, consciously or unconsciously, predict things about other people every day. The foreman, personnel director, superintendent, or anyone else you might name all assume things about other people with whom they deal. "If I do this, Sam will do that," or "If I don't agree to that, Bill will quit." And who has not found himself thinking thoughts like, "If I take these flowers home to the wife, will I get by?" Of course, everybody has. Since none of us lives in a vacuum, we are forced to make predictions about the behavior of our fellow man. These predictions are made on the basis of our perceptions, and our perceptions are often incorrect.

The ability to understand and predict the responses of others is called *empathy* by psychologists. They have found that there is much variation in this ability among individuals and groups. Some appear to be very sensitive to cues as to how others are feeling and reacting while others are totally unaware of the thoughts and feelings of people. This ability to see things from the other fellow's point of view may not increase respect or admiration for the other, but it does assure more effective communication and understanding.

Let's leave the theory and examine the psychologists' approach in terms of a practical industrial situation. Libo[2] has illustrated it well:

The management of a company is confronted with certain proposals from its union. These are rejected and counter-proposals are made. These in turn are rejected, and both groups stand firm. Now the union can threaten strike action, but that requires an understanding of management. "Will they frighten easily?" "How much of a loss will it entail?" "Will the company be able to wait us out?" Management, too, may be in doubt about the union. "Will they really strike?" "Are they bluffing?" "Will they back down if we call their bluff?"

Victory Can Depend on Accuracy of Predictions

Victory or defeat for either side may depend upon the accuracy of such predictions because they precede any action. As Pigors[3] has said: "In human relations we rarely meet plain fact. Certain events affect different people in different ways and will even seem quite different to the same person at different times. Thus, every point of view—even our own—is only a point of view on the whole arc of human understanding."

Since we all make predictions about other people and since we make these predictions according to the way things seem to us and not the way they actually are, we can measure understanding by testing the accuracy of these predictions. This is, in a nutshell, the idea underlying the work of the psychologists. Briefly, psychologists have designed an instrument employing a cross-questionnaire technique which yields a measure of the gap between labor and management and between management's and labor's understanding of the other group. The instrument itself is a simple form requiring little time to complete.

It is composed of a series of short statements of opinion with provision for a range of answers to denote agreement or disagreement. The direction as well as intensity of feeling is thus indicated. The individual items themselves, which have been assigned certain weights, tend to cluster about a concept of a general industrial philosophy. The higher the total score, the greater the indication of a pro-management attitude. The lower the total score the greater the indication of an anti-management attitude.

This one instrument is by no means the ultimate. While it appears to be doing a good job now, research is continuing on two other scales which may prove to be even better or equally as good. Norms have been and are being developed for the operator group, the front-line supervisory group, and the management group which make it possible to determine how any group in any given plant compares to comparable groups in the industrial population.

The administration of this technique offers no problems. It is given first to members of the operator and management groups with the instructions to answer each question as they feel. It is again administered to the same groups but on this occasion they are instructed to answer each item as they think the *other* group felt about it. On both occasions the questionnaire is administered so that complete anonymity is assured.

In actual practice, a much more comprehensive and valuable picture can be obtained by a three way analysis testing the operators, the supervisors, and top management. When this is done the supervisors are asked to complete the questionnaire three times: first, as they feel, secondly, as they think management feels, and thirdly, as they think the workers feel. Such an analysis is extremely valuable because it provides revealing information about the communications role of the front-line supervisor.

The three-group analysis is useful for answering many questions. To see how it works, it will be helpful to refer to the diagram.[4] One rectangle represents the operator group while the other represents the management group. The circles within the rectangles represent the way the groups see themselves and each other.

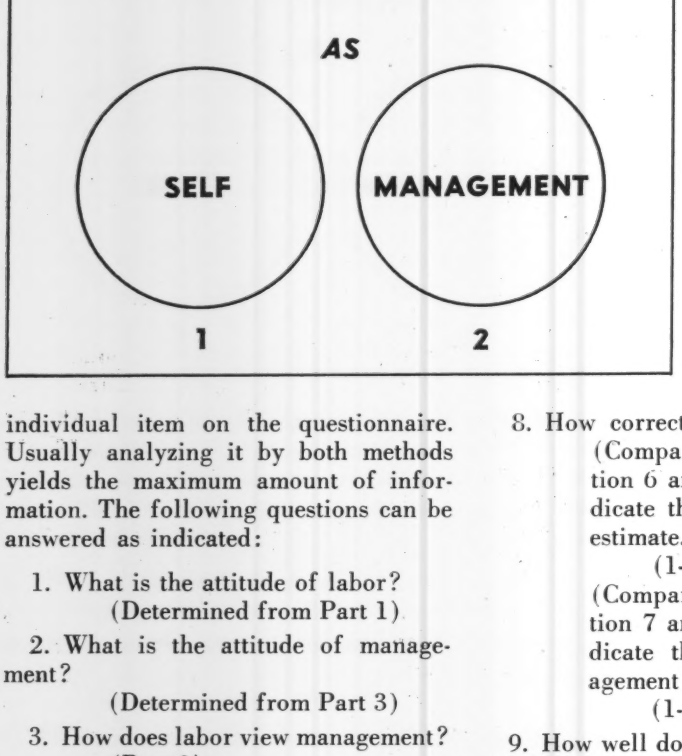
It must be kept in mind that this graphical representation can be for the entire scored questionnaire or for an

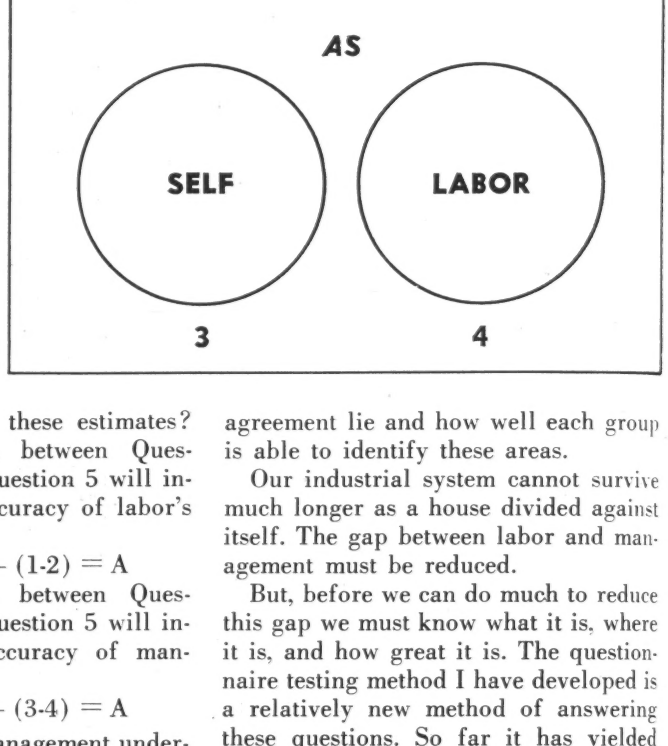
[1]See Remmers, H. H., "A Quantitative Index of Social-Psychological Empathy," *American Journal of Orthopsychiatry*, 1950, Vol. 20.

[2]See Libo, L. M., "Attitude Predictions in Labor Relations," *Studies in Industrial Relations 10*, Stanford University Press, 1948.

[3]See Pigors, P. "The Challenge for Personnel Administrators," *Personnel*, March, 1947.

[4]Based on Libo's schematic form. See L. M. Libo, *Studies in Industrial Relations* 10, op. cit.





individual item on the questionnaire. Usually analyzing it by both methods yields the maximum amount of information. The following questions can be answered as indicated:

1. What is the attitude of labor?
   (Determined from Part 1)
2. What is the attitude of management?
   (Determined from Part 3)
3. How does labor view management?
   (Part 2)
4. How does management view labor?
   (Part 4)
5. What is the gap between management and labor? Do management and labor agree?
   (Compare Part 1 and Part 3)
6. What is labor's estimate of this gap?
   (Compare Part 1 and Part 2)
7. What is management's estimate of this gap?
   (Compare Part 3 and Part 4)
8. How correct are these estimates?
   (Comparison between Question 6 and Question 5 will indicate the accuracy of labor's estimate.)
   (1-3) — (1-2) = A
   (Comparison between Question 7 and Question 5 will indicate the accuracy of management)
   (1-3) — (3-4) = A
9. How well does management understand labor? How well can they predict labor's responses?
   (Compare Part 4 and Part 1)
10. How well does labor understand management?
    (Compare Part 2 and Part 3)
11. Who has the best knowledge situation? Who predicts better?
    (Compare Question 9 and 10)
    (4-1) — (2-3) = P

In addition it is possible to draw conclusions about such matters as where the specific areas of agreement and disagreement lie and how well each group is able to identify these areas.

Our industrial system cannot survive much longer as a house divided against itself. The gap between labor and management must be reduced.

But, before we can do much to reduce this gap we must know what it is, where it is, and how great it is. The questionnaire testing method I have developed is a relatively new method of answering these questions. So far it has yielded very remarkable results, and the prospects are excellent that it will be able to yield still more when it is further refined.

Perhaps the most significant thing about this method, however, is that it represents an attempt to apply scientific procedures to the solution of our personnel and labor problems instead of guesswork. This is the approach that American businessmen used to build the greatest industrial machine in the world today. They must use it again to solve the problems of industrial relations.

Two Most Important Elements of the Mechanism of Management:
A Gem from Classic Management Literature

. . . Two elements, the task and the bonus (which . . . can be applied in several ways), constitute two of the most important elements of the mechanism of scientific management. They are especially important from the fact that they are, as it were, a climax, demanding before they can be used almost all of the other elements of the mechanism.

from The Principles of Scientific Management,
by Frederick Winslow Taylor, Harpers, 1913.

Special Report on A Test Analysis of A Group of Time Study Men

by Charles A. Thomas

This article was developed and written by request of the editors of ADVANCED MANAGEMENT. *All data and the conclusions drawn were specifically limited by the author to the groups studied within the scope and content of the measurements used. The subject is one of particular interest to the management field, and The Society is planning a nationwide research project in the same area.*

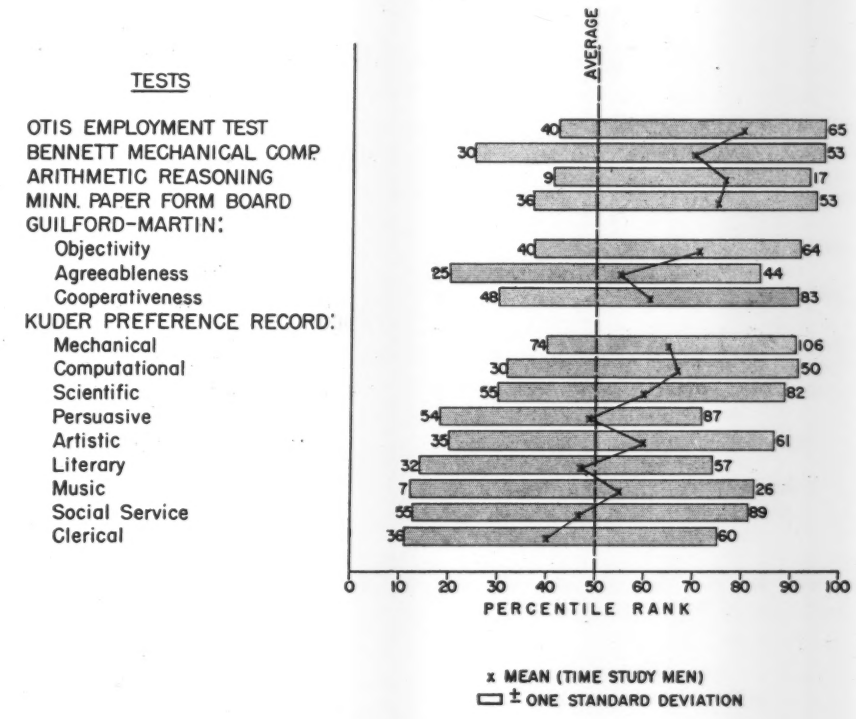
SEVEN years ago Phil Carroll described the results of a test analysis of a group of time-study men.* Over the succeeding years he continued to gather results, using the same basic test battery. An analysis of the performance of this greatly increased population is presented herewith. Grateful acknowledgment for statistical help is made to Mildred Slocum, psychometrist of the Industrial Relations Department, Standard Pressed Steel Company.

The following tests were used: Otis Employment; Bennett Mechanical Comprehension, Form AA; Minnesota Paper Form Board, Series AA; Moore Arithmetic Reasoning; Guilford-Martin Personnel Inventory; and Kuder Preference Record, Form BB.

A total of 253 time-study men from companies throughout northeastern United States and Canada took part in the testing. The subjects had all been trained in an identical technique of time study and were employed and using that system at the time of testing.

From Figure I it would appear that the time-study men tested in this sample rank above average in general mental ability (Otis), in mechanical comprehension (Bennett), in quantitative thinking (Moore), and in facility for visualizing bi-dimensional objects in relation to space (M.P.F.B.). They tend—though not unduly so—to be "thick-skinned" and argumentative. However, they are able to work with and get along well with others (Guilford-Martin). Their major interests (Kuder) appear to be computational and mechanical, followed by scientific. It will be noted that ap-

FIGURE I



*"Testing Men for Time Study", *Modern Management*, May and August, 1946.

proximately 68 per cent of the total group fall within the limits shown by the bars.

In Table I the mean raw scores of three separate companies, and the mean raw score of the total group of time-study men tested throughout all companies, are shown alongside the 50 per cent point of raw score for the norm group. Two facts are to be noted in this comparison: (a) the combined number of cases in the three companies shown is about half the total number (253) tested; (b) in the Moore Arithmetic raw scores the figures probably should be higher, since only 20 minutes were allowed instead of the standard 30 minutes, usual on such tests.

TABLE I

Comparison of the Mean Raw Scores of three Companies and the Total Group, with the 50 per cent point of the Norm Group Raw Score.

Test	Raw Score at 50% Point for Norm Group	Mean Scores of Time-Study Men			
		Co. A	Co. B	Co. C	Total Group
Otis	42	52	52	52	52
Bennett	38	42	40	43	42
Moore	10	13	11	12	13
Minn. P.F.B.	39	45	43	46	45
Guilford-Martin					
Objectivity	45	47	50	55	52
Agreeableness	34	34	32	33	36
Cooperativeness	59	61	66	67	65
Kuder Preference					
Mechanical	82	92	90	97	90
Computational	35	41	41	42	39
Scientific	64	71	66	65	68
Persuasive	73	74	75	75	71
Artistic	45	47	46	38	46
Literary	46	42	44	43	44
Musical	14	16	16	11	16
Social Service	74	65	66	92	72
Clerical	51	45	46	45	46

It was possible to study separately the test performances of companies A, B, and C with respect to differences in job effectiveness within each group. The time-study men in company A were rated by supervision in job effectiveness as follows: Group 1, high; Group 2, high average; Group 3, average; Group 4, low average; Group 5, low. Groups 1 and 2 were combined, as were Groups 3, 4 and 5. Critical ratio, or "t", was used to determine the significance of differences between the mean raw scores of 1 and 2 combined and those of 4 and 5 combined. (Group 3, average, was omitted from this comparison).

The number of cases in company B and company C were sufficiently small to use in each instance the rank-order method of rating for job effectiveness. The rank-difference correlation technique was used to determine the degree of relationship between test scores and job success.

TABLE II

The persons included here were divided into five groups according to effectiveness on the job. Groups 1 and 2 (high) were combined, and Groups 4 and 5 (low) were combined in order to test the significance of the differences between the means (critical ratio).

The following table presents the raw score means, the differences, "t" scores, standard deviations, and the raw score range (plus and minus one standard deviation):

	N	Mean	Difference	"t"	S. D.	Range, + & - 1 S. D.
Otis Empl. Test						
Group 1, 2	16	55.26	4.94	1.61	8.06	47 to 63
Group 4, 5	17	50.32			8.98	41 to 59
Bennett Mech.						
Group 1, 2	20	45.00	2.68	1.85	5.15	40 to 50
Group 4, 5	17	42.32			3.34	39 to 46
Arithmetic Reas.						
Group 1, 2	18	14.11	2.56	*2.42	3.58	11 to 18
Group 4, 5	19	11.55			2.56	9 to 14

TABLE II (continued)

Minn. Paper Form Bd.						
Group 1, 2	19	47.14	1.48	.58	7.90	39 to 55
Group 4, 5	12	45.66			5.86	40 to 52
Guilford-Martin:						
Objectivity						
Group 1, 2	18	53.84	8.82	*2.00	10.80	43 to 65
Group 4, 5	16	45.02			13.84	31 to 59
Agreeableness						
Group 1, 2	18	36.68	5.36	1.58	9.69	27 to 46
Group 4, 5	16	31.32			9.48	22 to 41
Cooperativeness						
Group 1, 2	18	68.55	19.30	*2.81	20.60	48 to 89
Group 4, 5	16	51.20			18.25	33 to 70
Kuder Pref. Record:						
Mechanical						
Group 1, 2	20	97.10	6.08	1.42	14.12	83 to 111
Group 4, 5	19	91.02			11.76	79 to 103
Computational						
Group 1, 2	20	39.70	−1.30	.39	11.00	29 to 51
Group 4, 5	19	41.00			8.88	32 to 50
Scientific						
Group 1, 2	20	73.70	4.92	1.18	13.08	61 to 87
Group 4, 5	19	68.78			12.84	56 to 82
Persuasive						
Group 1, 2	20	75.75	−.70	.13	15.30	61 to 91
Group 4, 5	19	76.45			18.45	58 to 95
Artistic						
Group 1, 2	20	46.95	−1.27	.32	10.20	37 to 57
Group 4, 5	19	48.22			13.76	35 to 62
Literary						
Group 1, 2	20	42.30	2.80	.86	8.28	34 to 51
Group 4, 5	19	39.50			11.24	28 to 51
Music						
Group 1, 2	20	12.40	−5.94	*2.23	7.72	5 to 20
Group 4, 5	19	18.34			8.44	10 to 27
Social Service						
Group 1, 2	20	67.10	−5.00	1.20	10.60	57 to 78
Group 4, 5	19	72.10			14.50	58 to 87
Clerical						
Group 1, 2	20	45.10	−3.04	.99	9.24	36 to 54
Group 4, 5	19	48.14			9.48	39 to 58

(*Relatively significant)

Company A

Groups 1 and 2 (high) combined, and 4 and 5 (low) combined, showing raw score means, differences, "t" scores, standard deviations, and raw score range (plus and minus one standard deviation).

Four significant differences are indicated: tendency for the more effective subjects to possess greater facility for reasoning with quantitative materials (Moore); to be more "thick-skinned" (objectivity); to work and get along better with others (cooperativeness), and to show less interest in Music (Kuder). (Musical interest appears to be inversely related to job success.)

TABLE III

Correlation coefficients (Rank with test scores), Mean, and score limits based on plus and minus one Average Deviation.

Test	Rho	"t"	Mean	Average Deviation	Limits plus, minus 1 A.D.
Otis Employment Test	*.49	2.13	52.73	11.66	41.07 to 64.39
Bennett Mech. Comp.	.23	1.00	40.68	10.17	30.51 to 50.85
Arithmetic Reasoning	.28	1.22	10.91	3.28	7.63 to 14.19
Minn. Paper Form Board	.38	1.65	42.50	8.32	34.18 to 50.82
Guilford-Martin:					
Objectivity	.28	1.22	50.45	7.01	43.44 to 57.45
Agreeableness	–.23	1.00	31.73	6.09	25.64 to 37.82
Cooperativeness	.28	1.22	66.13	15.58	50.55 to 81.71
Kuder Pref. Record:					
Mechanical	–.10	.43	89.50	11.77	77.73 to 101.27
Computational	–.01	.04	40.64	7.45	33.19 to 48.09
Scientific	.09	.39	66.95	9.86	57.09 to 76.81
Persuasive	*.51	2.22	76.00	12.18	63.82 to 88.18
Artistic	–.12	.52	48.23	10.52	37.71 to 58.75
Literary	.18	.78	44.95	9.81	35.14 to 54.76
Music	–.31	1.35	15.68	7.44	8.24 to 23.12
Social Service	.29	1.26	68.64	13.76	54.88 to 82.40
Clerical	–.22	.96	48.09	7.64	40.45 to 55.73

*Relatively significant (5% level of confidence)

Company B

Correlation coefficients (Rank with test scores), Mean, and score limits based on plus and minus one Average Deviation.

Only two tests of the total battery show statistical significance to success on the job: Otis, and the persuasive interest of the Kuder. Although the Bennett, Moore and Minnesota Form Board do not show significant differences, it might be helpful to consider the bottom scores obtained by minus one average deviation as minimum acceptable scores for time-study work.

TABLE IV

Correlation coefficients (Rank with test scores), "t" scores, Means, and score ranges based on plus and minus one Average Deviation.

Test	Rho	"t"	Mean	Average Deviation	Range, + & – One A. D.	N
Otis Employment Test	.70	*2.92	52.80	9.10	44 to 62	20
Bennett Mech. Comp.	.66	*2.44	44.13	8.86	35 to 53	16
Arithmetic Reasoning	.50	*2.08	11.60	2.80	9 to 14	20
Minn. Paper Form Board	.68	*2.83	46.95	5.06	42 to 52	20
Minn. Paper Form Board	†.46	*2.42	45.06	6.32	39 to 51	31
Guilford-Martin:						
Objectivity	.38	1.58	55.10	6.79	48 to 62	20
Agreeableness	–.06	.25	32.60	6.83	26 to 39	
Cooperativeness	.39	1.63	68.35	12.08	56 to 80	

TABLE IV (continued)

Kuder Preference Record:						
Mechanical	−.01	.04	96.50	11.31	85 to 108	16
Computational	.39	1.44	41.75	11.50	30 to 53	
Scientific	.29	1.07	65.06	10.68	54 to 76	
Persuasive	−.25	.83	75.69	18.25	57 to 94	
Artistic	−.28	1.04	41.63	5.28	36 to 47	
Literary	.35	1.29	43.81	8.66	35 to 52	
Music	−.20	.74	11.00	6.88	4 to 18	
Social Service	−.19	.70	92.38	13.22	79 to 106	
Clerical	.12	.44	47.44	11.37	36 to 59	

*Significant findings.

†French population group included.

Correlation coefficients (Rank with test scores), Means, and score limits based on plus and minus one Average Deviation.

Significant relationships are shown between success and test scores in the Otis, Bennett, Moore, and Minnesota Form Board.

One might ask: is there an interest pattern that is typical of men engaged in time-study work? Dale Yoder has pointed out, "A serious difficulty in the procedure of establishing patterns for various jobs arises from the fact that the nature of many occupations, the types of problems with which they deal, and the attitudes with which their work is carried on, are undergoing constant change."* We must examine this further, however. We can say that the nature of the occupation is the same but we must admit that, to some extent, the types of problems and the attitudes never were alike because of local conditions of companies within the total group.

Table V shows the interest emphasis in the three companies.

TABLE V

Illustrating the percentage of the time-study groups in companies A, B, and C expressing either interest or disinterest in the various occupational areas (as measured by the Kuder Preference Record).

	Company A 64 cases		Company B 25 cases		Company C 42 cases	
	Work Area	Per Cent	Work Area	Per Cent	Work Area	Per Cent
Expression of interest—75th Percentile or above	Mech.	47	Comp.	52	Mech.	50
	Comp.	44	Mech.	44	Soc. Serv.	33
	Scien.	44	Pers.	40	Scien.	31
	Art.	39	Soc. Serv.	36	Comp.	31
	Soc. Serv.	31	Scien.	24	Art.	24
	Music	27	Art.	20	Cler.	24
	Pers.	17	Music	20	Lit.	17
	Lit.	11	Lit.	16	Music	19
	Cler.	6	Cler.	4	Pers.	2
Expression of disinterest below 25th Percentile	Cler.	45	Cler.	40	Music	50
	Lit.	33	Lit.	32	Pers.	38
	Art.	25	Music	32	Lit.	36
	Music	23	Art.	28	Cler.	24
	Pers.	22	Soc. Ser.	24	Comp.	21
	Soc. Serv.	14	Scien.	16	Soc. Ser.	17
	Comp.	13	Pers.	12	Scien.	14
	Scien.	9	Comp.	8	Art.	14
	Mech.	2	Mech.	4	Mech.	2
	2.6 Interests per man		2.6 Interests per man		2.3 Interests per man	
	1.9 Disinterests per man		1.9 Disinterests per man		2.2 Disinterests per man	
	4.5 **Total** Significant Responses		4.5 **Total** Significant Responses		4.5 **Total** Significant Responses	

Interest in the Mechanical area is fairly evident. It ranks at the top of the interest list in all three companies and at the bottom of the list of disinterests. This was to be expected. Merely working in the manufacturing end of a business is evidence of interest.

Men from Company A and Company B are much alike in their preferences

*Personnel Management and Industrial Relations, Third Edition, Prentice-Hall, Inc., New York, 1948, p. 229.

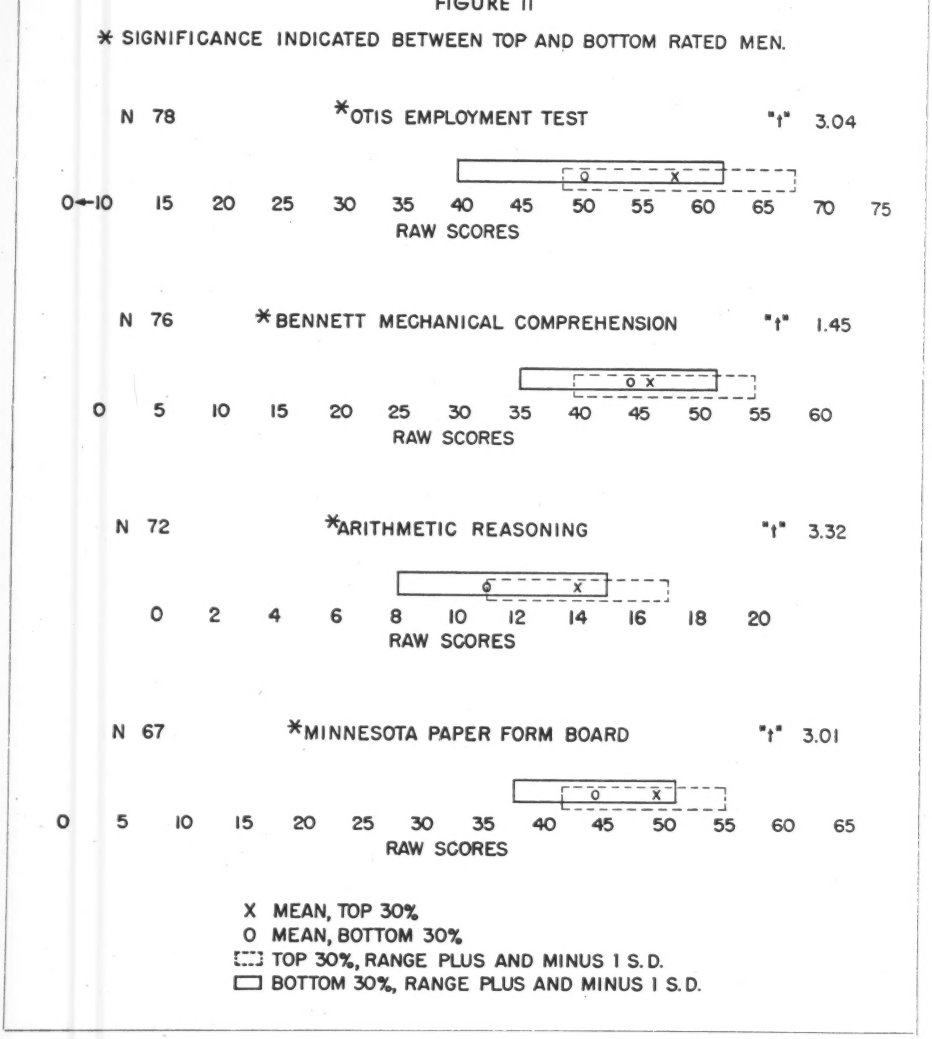
and disinterests. The disagreement appears in Company C. We don't offer the following explanation as scientifically factual but it is a possible explanation of variance due to the types of problems and attitudes indicated in the foregoing quotation from Yoder.

Companies A and B are fairly large organizations near New York City. Company C is in a small city in Canada located nearly 100 miles from the nearest large city. It is conceivable that apparent emphasis on the Social Service interest in Company C is the result of cultural influences. The isolated location and relatively small numerical size of Company C may be an adequate explanation of the popularity of interest in a "desire to help others."

Another approach was attempted. The test scores for men rated in the top 30 per cent of each company were compared with respect to the "t" scores. No significant differences were found. Since the scores proved to be representative of similar populations, it was possible to combine them into one composite group. The same thing was done with the scores for men ranked in the bottom 30 per cent in the three companies. Again, no significant differences were obtained so a group of lower rated men was formed. Then, using these two groups, significant differences were found to exist between the higher and lower rated men on three of the four aptitude tests used. These results are reproduced in Figure II.

Next the bottom 30 per cent from each company was compared to the total top group; the combined three companies. Significance was found to be as shown at right.

FIGURE II


* SIGNIFICANCE INDICATED BETWEEN TOP AND BOTTOM RATED MEN.
N 78
*OTIS EMPLOYMENT TEST
"t" 3.04
0←10 15 20 25 30 35 40 45 50 55 60 65 70 75
RAW SCORES
N 76
*BENNETT MECHANICAL COMPREHENSION
"t" 1.45
0 5 10 15 20 25 30 35 40 45 50 55 60
RAW SCORES
N 72
*ARITHMETIC REASONING
"t" 3.32
0 2 4 6 8 10 12 14 16 18 20
RAW SCORES
N 67
*MINNESOTA PAPER FORM BOARD
"t" 3.01
0 5 10 15 20 25 30 35 40 45 50 55 60 65
RAW SCORES
X MEAN, TOP 30%
O MEAN, BOTTOM 30%
TOP 30%, RANGE PLUS AND MINUS 1 S.D.
BOTTOM 30%, RANGE PLUS AND MINUS 1 S.D.

	A	B	C
Otis Employment Test	2.14		6.02
Moore Arithmetic Reasoning	2.31	1.96	3.29
Minnesota Paper Form Board		3.06	5.42

TABLE VI

Pearson r Coefficient	Number of Cases	r	"t"	Test Identification
.90 to 1.00—Very high correlation; very dependable relationship				
.70 to .90—High correlation; marked relationship				
.40 to .70—Moderate correlation; substantial relationship	95	.52	5.20	Otis with Bennett
	97	.47	4.70	Otis with Moore
	94	.44	4.40	Bennett with Minnesota
.20 to .40—Low correlation; definite but small relationship	93	.37	3.70	Otis with Minnesota
	96	.32	3.20	Bennett with Moore
	95	.27	2.70	Moore with Minnesota
Less than .20—Slight; almost negligible relationship				

One other analysis of the results is offered from a standpoint of general interest. Correlations were run on the aptitude tests using a little less than one hundred cases. Significant, positive relationships were indicated. To show the results in perspective the recommended divisions of Guilford were used.*

In conclusion, it can be said that the similarity of test performance is rather striking. The norms established by the group of approximately 250 time-study men presented here may well be considered as an aid in making selections for time-study work. However, it is well to remember that selection by tests in a particular company must be related to time-study work as defined in that company.

**Fundamental Statistics in Psychology and Education*, Guilford, J. P. McGraw-Hill Book Company, Inc., New York and London—1942.

Management Improvement: The Great Goal of Every Business and Management Philosophy

by John B. Joynt

In this article an official of a large American manufacturing company, using his own firm as an example, gives illustrations of how fundamental management philosophy can be put into practical use as a basis for management improvement. Citing facts and methods from his own company, he presents a picture of a system that can be applied to companies of all kinds, whatever their service or product.

No matter what our business is, no matter what our job is, we all are seeking ways to do that job better. In management improvement all business has a common goal. And we must have a common understanding of the meaning of management improvement.

From Taylor to World War I, through World War II to today, new advances in the science of management have been made by the growth of management principles, creeds, tools and techniques, skills, management education in universities and industry, professional activities, and today, more than ever before, management education in business. And in all these things we show one common goal—management improvement.

Management improvement also means improving organization structure, better planning, improving policies, streamlining our business procedures, standards, the coordination of inter-departmental and human interests, the handling of our corporate relationships both inside and outside, controlling our operations, appraising operating results, appraising and developing people, and taking corrective action where necessary.

In short, it is doing the best possible job while finding ways to do it better. Good management and management improvement are synonymous.

From these definitions it follows that anyone who supervises or manages not only should be concerned with management improvement but should continue to improve the management of his particular functions. Whether we are foremen, department head, or President, we share this responsibility.

I have been in and out of quite a few organizations studying management problems — organization, systems and procedures, etc.,—and I have seen a lot of need for improvement. Invariably, when you seek the underlying cause of a deficiency in any level, you trace it back to some deficiency at the top management level. Too often management points the accusing finger in the wrong direction. If we are to apply sound management principles down the line in our companies, we must put top management's house in order.

Do Small Firms Need Management Techniques?

As a leader in the American Management Association Training Center at the Astor Hotel in New York, I have talked to many business executives—corporation presidents, directors of personnel, finance and production, sales executives, and many others—from large and small companies.

Some representatives of small companies are under the impression that modern management techniques are for the large firms. That is not true. Small companies must compete with each other and with larger ones, and competition is not limited to sales. The competition extends to all functions of the business —to engineering, industrial relations, finance, and research—and to management too.

Nor can research be limited to technical improvements, even though our future may depend on technical know-how. We must do research in all aspects of the business operation. Each department must carry its share of the corporate burden. Each must contribute to the Company's success.

Yet in the past 50 years there has been a shift in management emphasis.

In a speech to plant personnel, the president of a manufacturing company

referred to this change as away from things closer related to the development of national resources, such as oil and agriculture. He indicated the change was toward improved techniques in management methods and their impact on human beings. He pointed out that American business is as profit-minded as ever, but that there has been a shift of emphasis toward human relations.

We are living in a day of specialization, but we don't want to grow a group of experts who have no consideration for the individual. This brings me to my next point—management philosophy.

Management philosophy involves four things: first, a basic attitude, second, a frame of mind, third, a guiding principle, and fourth, a conviction. Philosophy is the mental framework within which we operate, which breaks every job down into two parts; first, the thinking process, and second, the doing process.

In America we continuously re-affirm the dignity of the individual. Business must bear this in mind as it shapes the management philosophy of American business.

Management philosophy is a statement of priciple. It creates a proper climate in which we can develop—or it can do the reverse. It can set the tone, a pattern of action which filters down from the President to every individual in the companies—or it can stay in the top man's head.

Management philosophy can stimulate an organization so that it will move ahead in a definite direction with determination and confidence—or it can cause confusion and frustration. A recent business condition proves the truth of this statement.

Many good men are moving to new jobs to get away from mental frustration and confusion—to seek psychological relief.

Importance of Management Philosophy

In a recent American Management Association seminar on top management planning, a group of top company executives placed management philosophy number one on their agenda. Why did they do this? In their judgment the direction of an organization's thinking, its basic policies and objectives could not be fixed without an underlying philosophy.

Lawrence Appley, President of the American Management Association, recently said that "in his opinion, the ultimate in management philosophy is one that realizes that the jobs which management directs are outlets for the creative capabilities of people." Proper management philosophy should motivate an organization; it must provide an atmosphere for progress.

Many companies have developed management philosophies and put them in writing. Some are called company creeds. This adherence by a company to a sound management philosophy is a reflection of corporate character.

Clarence Francis, Chairman of the Board of General Foods, in 1948 said this:

"I believe that business must be run at an adequate profit. It must hold its own in fair competition with other business.

"I believe that business must serve employees, stockholders, consumers, and government, and that management must make the interest of all these elements balance.

"I believe that management operating goals are continuously improved through productivity and growth—in order to provide jobs, reward investors, attract capital and provide more and better goods and services at lower costs.

"I believe that the greatest assets of business are human assets, and that the improvement of their value is both a matter of material advantage and moral obligation.

"I believe that employees must be treated as honorable individuals, justly awarded, encouraged in their progress, fully informed, and properly assigned. Their lives and work must be given meaning and dignity both on and off the job.

"I believe that the reputation for integrity is another priceless asset of any business and that management must deal fairly with customers, competitors, and vendors, advertise truthfully, fulfill its commitments, cooperate with other management for the betterment of business as a whole, and oppose any artificial restriction that may limit production prices or restrain trade.

"I believe that the future of the American Economic system depends on the confidence, good will, and understanding of the people, and American leadership must make itself a responsible part of the human community by participating in worldly activities, locally and nationally.

"I believe that when business has earned a hearing it has not only a right but a duty to ask for public confidence; and that it must speak freely, give information gladly and answer the attacks of those who seek to undermine American freedom under democratic capitalism.

"I believe finally that business leadership is nothing less than a public trust; that it must offer a message of courage and hope to all people and that it must help an economically strong America to lead other nations to lasting prosperity, freedom and peace. I will work not only for the advancement of myself and my family, and my country, but for liberty and democracy for America and the world now and in the years to come."

How One Company Operates

So business management philosophy is unavoidably a personal thing—a reflection of the attitude, the views, and the thinking of the President, and that thinking should not mirror two schools of thought.

The management philosophy of American Enka Corporation, laid down by the President, Mr. John E. Bassill, contains four basic goals; (1) to maintain a high level of executive and employee morale, (2) to be the best managed company in the rayon industry, (3) to be the most respected in the rayon industry, (4) to be the most successful in relationship to profit potential.

At the request of Dun's Review, Mr. Bassill condensed American Enka's Management Philosophy into an article which appeared in the May, 1952 issue of "Blueprints for Presidents." In the article he set down 17 basic points.

1. Develop a recearch-minded organization in its broadest sense.
2. Develop a supervisory force with an appreciation for methods improvement and good human relations.
3. Promote maximum utilization of our human resources and maximum satisfaction of all our people in the performance of their tasks.
4. Bring our administrative skills up to the level of our technical competence and raise the level of both to a still higher plane.
5. Create a climate in which our whole management group can thrive and develop and prepare itself for greater responsibility.
6. Create internal pressures which will force the company to grow, provide bigger and better jobs for more people and a broader earnings base for our stockholders.
7. Employ the most modern and effective management tools and engage such outside assistance as may be necessary to insure application of the

best possible management know-how.

8. Establish a system for crystallizing long-range plans and objectives.
9. Insure a sound organization structure at all levels.
10. Reduce the company's plans, policies, and procedures to writing.
11. Establish a well-balanced system of reporting designed to insure that all levels of management are fully informed of progress covering significant operations.
12. Continuously appraise results through measurement of performance in terms of predetermined plans and objectives.
13. Encourage two-way communications, bottom-up as well as top-down and an "open shop" in management.
14. Promote among our employees the freedom to speak one's mind on any subject concerning the company's welfare.
15. Accord to our executive group the same right to be heard by higher authority as we do our hourly workers.
16. Be a good citizen locally and nationally.
17. Keep before our entire management group the importance of setting and attaining objectives so that our profit goal can be met.

Improvement Program's Basic Objectives

Enka has had a management improvement program for over three years. It is a company-wide effort to improve management know-how and to do a more effective job in all functions of the business.

Every department head has assumed responsibility in his assigned field. The program was spearheaded by the President. When he turns the company over to his successor he wants it to be better than he found it. In carrying out this program, he and his Vice Presidents are, in effect, balance wheels. Each Vice President must blend together the programs and interests of their departments. But the President must blend into one all the major interests and activities of the company.

This improvement program centers around seven elements of management.

1. *Planed Objectives*—to determine what the organization plans to accomplish.
2. *Well-balanced Organization* — to enable all organizational elements and every individual to function most effectively.
3. *Sound Policies and Procedures*—to establish the framework within which the company functions.
4. *Qualified Personnel*—to insure that each individual contributes proportionately to the overall objectives.
5. *Adequate Physical Facilities*—to assist our personnel to the fullest extent in attaining maximum output, both qualitatively and quantitatively.
6. *Performance Standards*—to establish realistic operating yardsticks by which results may be measured.
7. *Appraisal of Results*—to insure that results are being accomplished in accordance with planned objectives and established performance standards.

What Tools Can Accomplish The Objectives?

What management tools is Enka applying to accomplish these seven basic objectives? Here they are in detail:

1. *Planned Objectives*
   a. Profit Planning
   b. Budget and Financial Planning
   c. Program Planning
2. *Well Balanced Organization*
   a. Organization Planning
   b. Job Descriptions
   c. Organization Charts and Manuals
3. *Sound Policies and Procedures*
   a. Policy Planning
   b. Procedures Studies
   c. Policy and Procedure Manuals
   d. Work Simplification
   e. Employee Suggestions
   f. Forms, Equipment, Records, and Report Control
4. *Qualified Personnel*
   a. Effective Utilization of Personnel
   b. Personnel Development
   c. Management Education
   d. Conservation of Executive Time
5. *Adequate Physical Facilities*
   a. Effective Layout
   b. Proper Equipment
   c. Proper Facilities
6. *Performance Standards*
   a. Quantity, Quality & Cost Standards
   b. Work Measurement
   c. Performance Standards
   d. Forecasts
7. *Appraisal of Results*
   a. Progress Reports
   b. Statistics and Charts
   c. Group Appraisals of Personnel
   d. Internal Audits
   e. Management Audits

Each of these objectives require research and communications.

8. *Research*
   a. Technical
   b. Administrative
   c. Human Relations
9. *Internal Communications*

Administering the Program

The first step in developing proper approach is organization. We must first organize our thinking, and then organize our approach to carry out this program. So often we put the "doing" process ahead of the "thinking" process. We are too anxious for results. We should first take time out for mental digestion, to think in terms of broad objectives, to determine what is important.

In doing this, there are two approaches, the centralized approach, and the decentralized approach. Under the centralized approach one group might carry the burden for management improvement for the entire company. Under the decentralized approach every department actively participates in the program.

Enka, for illustration, has proceeded on the decentralized basis. An office was established called the Administrative Engineering Department, part of the Office of the President. It functions in a staff capacity, assisting in carrying out certain aspects of the management improvement program including:

1. Organization planning.
2. Developing a uniform approach to program and project planning and progress reporting.
3. The analysis of policy and procedures.
4. The developing of a uniform approach to the establishment of performance standards, and the appraisal of results through management audits.

This department functions also like an outside consultant, since responsibility for management improvement is fixed with line and staff department heads throughout the company. The Administrative Engineering Department works closely with both department heads and Vice Presidents, particularly on the coordination of inter-departmental problems.

Developing a Service Concept

In addition to the company's basic management philosophy, the philosophy of the management improvement program itself is extremely important. If an organizational unit or individual is assigned to spearhead such a program within the company, it must concern

itself with top managements plans, policies, and procedures. Anyone carrying out this sort of a program should serve and assist the chief executive and his key staff and line officials, but he should not be charged with the responsibility for the administration of their functions. These are responsibilities of the operating units.

I have been a part of management improvement in several companies. The approach varies in each case. There is no one best way to do the job. Each company must learn the way the program will work best for it. There are two procedures I recommend, however: (1) that the program be company-wide and a part of managements regular responsibilities, (2) that if your department heads need help, the individual assigned to assist them should act in a staff or service capacity but not do the job for them. Above all, this individual must not direct their operations.

At Enka, to continue our example, basic management objectives and goals were determined first. The company then proceeded on a four-step basis as follows:

The first step was the analysis of the organization structure of the entire company. Our basic objective was organization improvement; our end product, a company organization manual. Every supervisory employee from the President of the company to the foremen in our plants prepared a statement covering his authority and responsibilities.

In approaching organization improvement, Enka's President said: "I would like to have the best possible plan of organization with the people now in the company." Under this philosophy were combined organization planning with personnel planning.

From organization planning we went into program and project planning. To get this program underway, the responsibility for formulating a uniform approach to program and project planning was assigned to the Administrative Engineering Department.

Every department of the company now prepares what we call an "annual work program" although it is not limited to plans one year in advance. These program plans are prepared at the end of each year. They cover both long and short-range plans. Programs are translated into action through specific projects. Some projects are subdivided into jobs. Projects to be completed in the succeeding year are scheduled to the extent that this can be done. At the end of each year the plans are reviewed and revised, and a new list of projects prepared for the following year.

In addition to departmental plans, a master plan reflects possible areas of expansion or other major programs which may involve major capital expenditures. This plan points the direction in which the whole company—not any single department—is going. Departmental planning is then synchronized with the master plan.

Analysis of Policy and Procedures

After the responsibilities of department heads had been fixed by the organization manual and major plans laid, the Enka company was divided into 20 projects for purposes of analyzing policy and procedure. Many of these projects will result in policy and procedure manuals. We examine policy and procedure from a functional point of view, not necessarily departmental.

Many of our major procedures are inter-departmental in character and several departments participate in the improvement process. The Administrative Engineering Department coordinates inter-departmental interests.

A management audit constitutes a complete appraisal of the effectiveness of an organizational unit—plans, policies, procedures, reports, personnel, training, development, every aspect of its operations, and the results being obtained.

Enka will undertake a management audit program soon. It, too, will be handled on a co-operative basis. The Administrative Engineering Department will work the departments concerned and the appropriate Vice President first in determining the proper appraisal factors, and second by jointly examining the functions of the department in the light of the appraisal criteria agreed upon.

The influence of key personalities is a significant factor in gaining acceptance of management improvement at all organizational levels. Any company-wide program must have management support. A management improvement program, therefore, should have top management backing first, to gain support and acceptance of subordinate units. The extent to which management improvement is accepted depends largely on the leadership and attitude of key officials.

The first step in improving management is to determine basic principles and objectives. This applies to organization, planning, policy and procedure, management audits, etc. Before we went into organization planning, we first sought agreement on basic principles of organization. Where there is a program approach and agreement on principles we avoid two things: *First*, the alternative, putting-out-fires approach, and *second*, the prevalent attitude that somebody is pointing the finger at one department only.

When basic principles are agreed to, we then have a common denominator on which to make change.

Maintaining morale during periods when changes are being developed is an important factor in administration of a management improvement program. We can recognize that confidence in management and sound personnel policies are important morale-building factors.

Individuals concerned should be advised of change in the right way by their line superior in advance rather than receive a formal announcement. Participation in development of new ideas not only aids in gaining acceptance, but it eases the psychological tension during the developmental process. Participation creates a sense of belonging to the new idea.

Changes should be made carefully and with full recognition of the human relationship factors involved. In the final analysis, we are an organization of people, not statistics.

Gaining acceptance to improvements, attitudes, and reactions are all conditioned by similar factors. In all organizations a certain number of individuals take a positive view to improvement, and a certain number takes a negative view. Usually the negative group is a minority.

Where the initial reaction to management improvement at Enka may have been negative in some cases, it has changed materially during the past few years. Experience shows that the evolutionary process of changing attitudes is somewhat as follows:

(1) At first there are doubts and suspicions, and some cautious resistance based largely on mis-interpretations, lack of understanding, and fear.

(2) Then there is a gradual understanding as to the need, and a realization of the values to be gained.

(3) Attitudes change to a desire for progress and to make improvements by individual initiative.

This evolution takes time and patience, and not until such time as one begins to see benefits can full acceptance be expected.

The Morale or Attitude Audit—A Frontier In Employer-Employee Relationships

by B. N. Taylor

Communications between the top management of an organization and the supervisory level is one of the growing problems of management. The key to the problem is the method by which supervisory employees can be brought to give candid opinions and suggestions on current procedures. In this short article a midwestern city manager tells of the success of one method—the questionnaire, giving reasons for its use and showing in its entirety the actual questionnaire answered by the employees.

THE use of periodic morale audits or attitude polls is becoming more and more popular in progressive organizations. This enlightened practice on the part of advanced top management is conquering a new frontier in employee-employer relationships. As the National Industrial Conference Board points out:

"In 1944 the Board had difficulty in finding 50 companies that had conducted such surveys, but by 1947 it found that 7 per cent of nearly 3500 companies had used one type of attitude survey or another. . . . Since 1947, inquiries on the subject have increased sharply."[1]

An attitude survey reduces complaints and tends to eliminate unfavorable gossip and unfounded rumors. In their recent book, *Practical Business Psychology*, the Lairds state that morale surveys improve conditions even though nothing is done to correct the things complained about. As they put it, "Merely airing their 'pet peeves' makes employees feel relieved."[2]

"The National Industrial Conference Board has this to say:

"Attitude surveys are designed primarily to mirror the thoughts and feelings of employees about their jobs, about the company — its policies and practices, and about the people in the company—with particular emphasis on the members of the management group."[3]

Several years ago this author made one of these morale audits in another municipal organization. After a review of that study, Charles R. Meeks of Boston University made this comment:

"Although there is some question in my mind as to the real practicality of the statistics evolved, I do feel that such a survey can be immeasurably successful in raising employee morale. From the standpoint of being an inexpensive, morale uplifting device, I believe that its value far outweighs any disadvantage."

And one of our supervisors observed, "The mere opportunity to express my feelings on a questionnaire salves my ego. I have already received my reward. It makes me feel good to get all this written down on paper."

There should be an effective means of communication between management and supervisory people and vice-versa. Supervisors should be free to express their opinions on matters which relate to their working conditions, to their superiors, and to the organization as a whole. We do not believe that top management effectively communicates with its supervisory people; likewise we do not believe that the supervisory group is given enough freedom in expressing its views to management.

The purpose of the study was to ascertain how our people felt about their jobs, their responsibilities, their various relationships, both to those above and below them.

Survey Results Were Encouraging

The results of this survey were most encouraging. While a small percentage of the answers to some of the questions were disappointing, the majority of the

[1] National Industrial Conference Board, Inc., *Experience with Employee Attitude Surveys*, Studies in Personnel Policy, No. 115, New York, 1951, p. 7.

[2] Donald A. and Eleanor C. Laird, *Practical Business Psychology*, McGraw-Hill Book Company, Inc., New York, 1951, p. 265.

[3] National Industrial Conference Board, *ibid.*, p. 6.

answers to most of the questions would indicate an unusually satisfactory work situation. Some of the questions were more important than others. The answers to questions Nos. 7, 13, and 16 particularly gave us the most positive gratification because we felt that the things we had been advocating in our training course were believed in by a majority of our associates.

As we have repeatedly pointed out to our people, our objective is to develop our supervisory group into a harmonious work force. Teamwork is the very basis of all good operations. We want our supervisory people to feel that they "belong" to the organization. We want them to accept as well as to delegate authority and responsibility. We want them to get the utmost satisfaction from their jobs. We want them to be happy and contented as long as they remain with our organization.

While this attitude survey was designed for our organization in particular, most of the questions would fit any sort of institution whether it be business, industrial, educational, or governmental. We strongly advocate the use of periodic morale audits. Based on considerable experience, it is our firm conviction that nothing but good can come from one of these attitude polls.

Tabulation of Results of Attitude Survey
(Supervisors Only)

	NUMBER	PERCENT*
Question 1: **How do you feel about your present job: Do you find it interesting and pleasant most of the time, some of the time, or is it hardly ever interesting and pleasant?**		
Most of the time	51	94
Some of the time	3	6
Hardly ever	0	0
Express no opinion	0	0
Question 2: **Here are three different work situations. If you had your choice, which one would you choose?**		
One which pays a low salary but which you were pretty sure of keeping	14	26
One which pays a good salary but which you have a 50-50 chance of losing	20	37
One which pays a high salary if you make the grade but in which you lose everything if you don't make it	20	37
Express no opinion	0	0
Question 3: **List in the order of importance (1, 2, 3, etc.) the qualities below which you think really get a person ahead the fastest.**		
Hard work	47	87
Having a pleasing personality	44	81
Ability	51	94
Knowing the right people	5	9
Good luck	0	0
Being a good politician	1	2
Express no opinion	0	0

*Note: On questions 3, 12, 17, 18, and 20 more than one answer was marked by several respondents. The total percentage, therefore, adds up to more than 100.

Question 4: **What do you think about your present job? How do you compare working conditions with the city with other public utilities, banks, or mercantile establishments?**		
Prefer my job to either job with utility, bank, or mercantile establishment	51	94
There isn't much to choose between	0	0
Prefer a job with utility, bank, or mercantile establishment	1	2
Prefer other kind of work but do not want to make a change now	2	4
Prefer not to answer	0	0
Question 5: **One symptom of job insecurity is an employee's attitude about how he stands with his organization. Do you feel that you know how you stand with the city (or your superiors)?**		
Yes	47	87
Uncertain	5	9
No opinion	2	4
Question 6: **What is your attitude toward your immediate superior?**		
Strong liking	43	79
Mild liking	7	13
Neutral	2	4
Prefer not to answer	2	4

	NUMBER	PERCENT
Question 7: **Do you feel that you are a vital and essential part of the municipal organization: That you "belong"; that your own particular job is essential; that your work here really counts for something?**		
Yes	54	100
No	0	0
Not sure	0	0
No opinion	0	0

(Regardless of your answer to the above question, please answer the next one.)

Question 8: **Do you feel that your employer (management) recognizes you as an important part of the organization, or just as another cog in a big machine?**		
Management recognizes me as an important part of the organization	49	91
Management doesn't care so long as I do my work	4	7
Management is not interested in me as an individual human being	0	0
Management is only interested in me as another cog in a machine	0	0
Express no opinion	1	2

Question 9: **In your position as a supervisor of other workers, do you feel that you are working *for* someone higher up, or do you feel that you are working *with* a team?**		
FOR someone higher up	3	6
WITH a team	50	92
Don't know	1	2

Question 10: **Regardless of your feeling about the above question or your answer what would be your preference if you had a free choice?**		
To work FOR someone higher up	2	4
To work WITH a team	52	96
Makes no difference to me	0	0

Question 11: **Do you feel that you are on top of your job?**		
I am pretty certain	48	89
I am not so sure (at times)	5	9
I doubt if I am competent to express an opinion	1	2

Question 12: **Do you feel that your immediate superior delegates sufficient authority and responsibility to you?**		
Yes, sufficient of both	43	79
Too much responsibility without enough authority	2	4
Just about right amount of each	8	15
Not enough of either	3	6
Don't understand the question	0	0
No opinion	0	0

Question 13: **Organizations with enlightened personnel programs are devoting time and energy to human relations as well as to work problems. In your opinion, about how much time and effort should we spend on improving employer-employee relations?**		
A great deal of time and effort	45	83
Some; but don't know how much	9	17
Very little	0	0
No opinion	0	0

Question 14: **Some democratic supervisors willingly share with their work force the problems of planning, job assignment, work scheduling and decision-making. Do you think this sort of policy is entirely too liberal, too far advanced for our organization, or is a pretty good idea?**		
Entirely too liberal	2	4
Too advanced for our organization	3	6
Would strip supervisor of all authority	0	0
Afraid of it, but willing to try it out	2	4
Think it is a pretty good idea	46	84
No opinion	1	2

	NUMBER	PERCENT

Question 15: **It is pretty generally conceded by most personnel authorities that supervisors are essentially administrators and are consequently a vital part of management. What is your opinion about this in regard to your own job?**

I definitely feel that I am a part of management	49	91
I do not believe that I am recognized as a part of management	2	4
I would like to be a part of management	3	5
I do not care to be a part of management	0	0
No opinion	0	0

Question 16: **Some people think that closely-knit employee-management relationship is emotional, having only inspirational value, but no economic significance. Which of the following answers best describes your feeling?**

I think it is a lot of high-sounding talk	1	2
It has some inspirational value but does not result in higher production	0	0
It definitely is worthwhile and results in increased efficiency and higher output	53	98
I am not qualified to answer	0	0

Question 17: **A prominent industrial relations consultant has said, "Supervisors know entirely too little about the thinking of their employees. Dissension goes undetected becaue management does not get close enough to the workers." Which of the following statements best expresses your views on this matter?**

I'll admit that I am not as close to my employees as I should be	11	20
I would like to get closer to them but they keep their distance from me	2	4
I don't care what they think as long as they get the job done	1	2
I really believe that I enjoy the confidence of my workers and know that they are thinking	43	79
No answer	1	2

Question 18: **Does the supervisor, who promptly and cheerfully gives credit to a worker under him for a job well done, take any credit away from himself, gain the respect and loyalty of his people, or get credit for having developed capable employees?**

Takes credit away from himself	1	2
Gains respect and loyalty of his workers	49	91
Gets credit for developing capable employees	22	41
Don't know	0	0

Question 19: **The most liberal and enlightened personnel practice tends to eliminate the military idea of distinction or social distance between the supervisor and his work group. Which one of the following statements best expresses your feeling about this relationship?**

A supervisor cannot have the proper respect of his group or maintain discipline without emphasizing the distinction between his position and that of his workers	3	6
A supervisor should not through words or action show any signs of distinction, but he should discreetly keep at arm's length from his employees	3	6
A supervisor to gain the respect, devotion, loyalty, and confidence of his people should seek to eliminate any distinction	48	88
Don't understand the question	0	0

Question 20: **The motives that keep people happy and contented with their jobs may be broadly classified as "financial" and "other", as set out below:**

Financial Motives	*Other Motives*
	Participation in Work Program.
Wages.	**Opportunity For Self-Expression.**
	Equal Opportunity For Promotion.
Pensions.	**Feeling of "Belonging" to Organization.**
	Sympathetic Understanding of Supervisor.
Group Insurance.	**Job Security. Desire For Recognition.**
	Good Working Conditions. Congenial Associates.
Sick Leave, etc.	**Opportunity to Have Grievances Heard and Considered.**

It is said that both kinds of motives are required for complete job satisfaction. Which of the answers below best describe your own views?

Other motives are more important to me than financial factors	14	26
I would rate them about 50-50	42	78
I am not interested in anything but financial factors	0	0
I am not qualified to make a comparison	1	2

Advanced Management Reports . . .

A New Service For Advertisers

OVER and over again, the speakers who addressed the 1952 Annual Fall Conference of the Society for Advancement of Management referred directly or indirectly to the problems that management faces when distribution is being discussed or analyzed.

W. Paul Jones, president of Servel, Inc., said, "It is necessary, when sales slow down, for an industry to determine if it is caused by (1) Saturation; (2) Lack of salesmanship, advertising or sales promotion; (3) Diminishing basic product appeal; (4) Lack of dress-up appeal, feature appeal or new utility appeal."

New Director

His address might well have been delivered before any of the powerful associations concerned with advertising and sales.

As an aid to those who have goods or services needed or wanted by the thousands of executives who make up the 57 active chapters of the Society, a new service is available to Advanced Management advertisers.

At the head of the project is Frank E. Fehlman, member of the N. Y. Chapter, former President of the New York Advertising Club, and one of the 25 founders of the New York Sales Executives Club.

Mr. Fehlman as a consultant has, during the past 17 years, served 42 newspapers, five magazine publishers, 21 banks, and 17 manufacturers scattered in different marketing areas of the country.

His latest book, "How to Write Advertising Copy that Sells", published by Funk & Wagnalls, is now widely used as a text both here and abroad.

As of August 1st, Mr. Fehlman will act as Advertising Counsel to the Society. Advertisers may seek advice or assistance, when campaigns are planned for release in Advanced Management.

Like thousands of sales and advertising specialists, Mr. Fehlman is "from the ranks." His first work in a plant was as a molder's apprentice.

He will serve as an Associate Research Director, under the direction of the Publisher and Dr. Vincent Flynn, Research Director.

Advanced Management is a marketplace of stature today. Hundreds of the Society's members sit almost daily with purchasing committees.

Manufacturers or those who offer special services will find Advanced Management an excellent place to tell about their offerings.

Advertising Review For The Month

By Frank E. Fehlman,
Associate Research Director,
Society for Advancement of Management

Three basic costs are involved in the publication of a business paper: (A) The tons of white paper needed for each issue. (B) The editorial costs. (C) The cost of selling advertising space.

In 1860, the total advertising bill of the United States, with a population of 31,443,321, was less than $50,000,000. In 1952, with a population of approximately 158,000,000, our total advertising bill amounted to $7,219,600,000. Of this total, $335,600,000, or about 14.9%, was spent in business publications. Over 2,000 such publications are now listed in the Standard Rate & Data Book each month.

Today the publisher can do little about his paper costs. They are fixed at some mill, and since 1940 have trebled. Editorial talent is usually worth exactly what you pay for it. A good editor who wins and holds his subscribers year after year is "worth his weight in gold."

The history of all business publications proves the next observation. Advertisers will try almost anything once, but unless orders can be traced to the advertiser's messages he soon stops spending his money in a publication that does not produce results.

Business papers, like consumer publications, are the "lengthening shadow" of some policy or personality. The title of this publication, ADVANCED MANAGEMENT, describes the basic forward-looking approach of the Society to management, which includes the subject of distribution. Advertising is certainly deeply involved in all forms of distribution.

In 1819, Thomas Jefferson wrote a friend, Nathaniel Macon, that "Advertisements contain the only truths to be relied on in a newspaper." His 134-year-old observation certainly cannot be true of our publications today. His bitter criticism of the press of 1819 may have been justified, but today we find in business papers in particular, the constant release of information that stems from some of the greatest laboratories in the world.

To translate the findings of the engineer and scientist into advertisements for an old or new product calls for a high degree of skill, and above all else, statements that the reader can accept as being truthful.

Today the American Business Press, with its millions of readers, represents the foundation of our entire economy.

Practically every segment of business is now served by one or a dozen publications who devote all of their editorial material to advancing the affairs of their subscribers. Over 600 different categories are now reported in Standard Rate & Data.

Management has been slow to define its objectives, and as a result there are only a few publications devoted to this most important subject. ADVANCED MANAGEMENT is one of them.

The advisory service for manufacturers and service organizations set up at National Headquarters of the Society is offered without charge or obligation. Members and their friends are urged to use it whenever they need advice or counsel about their advertising that might be run in ADVANCED MANAGEMENT. It is a new addition to the many other useful services performed by SAM.

How Plant Layout and Material Handling Should and Can Be Tied Together

symposium by Richard Muther

In this record of a panel discussion held by the Kansas City Chapter of The Society, jointly with the Society of Industrial Packaging and Material Handling Engineers, the problems of how physical layout of a plant can apply to production conditions are explored in detail, giving a clear view of one way management problems can benefit from local Chapter activity.

Moderator: Tying handling and layout together is important in every plant. In what types of industries or operations is it more important than others?

Panel Member: It is especially important that handling and layout are tied together in places where large quantities of material have to be moved, where there are relatively high labor costs, where there are heavy, awkward, or large materials to handle, or in a process-type industry or one in which the sequence of operations is closely integrated, as in a production line.

Moderator: What economic factors enter into the machine layout and material handling arrangement?

Panel Member: In working out the costs, savings must equal expenditures plus. On the savings side we have such factors as labor savings, savings resulting from increased production efficiency, savings from less investment in materials-in-process, from less damage to materials, from increased safety, from simplified accounting, production control, and supervision, and savings from greater flexibility. On the expenditure side, we have such factors as preparation and engineering costs, equipment and installation cost, interest on investment, rent on space required, depreciation, power, taxes, maintenance, and costs of interruption to production. This takes care of both sides of the equation very well except for the plus factor. This largely depends on the word "reasonable." Managers of most companies expect the savings from these projects to pay off the investment within a reasonable length of time. This depends upon the financial resources of the company, tax policy, and the like.

Many of the savings mentioned are termed intangible. However, they may not be as big as one thinks. Too often, so-called intangible expenses are treated too lightly. They are ploughed off as not worth bothering with; other times they are considered too optimistically as a source of savings. Thus, plant layout and material handling engineers sometimes overlook some very good opportunities or present statements summarizing false or fancied economies.

Moderator: Are there other approaches to this cost measurement?

Panel Member: I would like to mention the use of what we call an economic index. The index is simply A divided by B. A—the proposed time or dollars, divided by B—the actual existing time or dollars. For any improvement, the index must be less than a 1.00.

Moderator: What approach or steps of analysis to plant layout insures that proper consideration of handling has been made?

Panel Member: First consider the materials or products, then the operations and operation sequence, next the equipment you plan to use, and then tie in your material-handling requirements and storage facilities. This approach makes material handling an integral part of the plant-layout study.

Moderator: Turn the question around. When you approach a material-handling problem, what steps of analysis or approach would insure that plant-layout problems have been considered?

Panel Member: First, be sure that there is close coordination between plant layout and material handling engineering. This is vital. Second, actually diagram the paths of material movement on a layout drawing or diagram. Third,

make a tabulation of old floor space and compare it with the new space tabulation. These three things should help insure that layout is properly considered.

Moderator: At what stage of plant-layout analysis should material handling be considered?

Panel Member: As soon as you begin to study the flow, routing, or sequence of operations. This is definitely near the beginning. Certainly, no later than when the flow is diagrammed or the flow diagram drawn. In certain cases, where handling is the major problem, handling could be the very first thing to consider. On the other hand, where there is a number of similar machines in a job shop and there is generally recognized handling equipment used for that type of industry, the handling details can come later.

Moderator: In what ways does the planning of material handling and layout differ for a job-lot manufacturer and for a production-line type of plant?

Panel Member: In line production, handling is an integral part of the layout; it must be planned into the flow. With job-lot layout, you expect to use one of several types of handling equipment and once that general class of equipment is agreed on the actual selection can wait until the detailed arrangement of machines is being planned.

Moderator: What influence will the building have on the type of handling equipment and layout selected?

Panel Member: It will certainly have an important effect. Column spacing, ceiling heights, floor load, the actual walls—to sum it up, the structural limitations, will very definitely have a bearing on the material handling equipment. Even the shape will have its effect, for instance, a long and narrow building has special problems for various kinds of handling equipment. And we should not forget that shape may be vertical as well as horizontal. In a multi-story building the handling equipment is altogether different than in a one-story building.

Moderator: If you have a multi-story manufacturing plant, which location lends itself best for storage areas—the basement, the top floor, or some other location in the building?

Panel Member: This is going to vary considerably with the product. If you have to inject raw material in the sequence and you are in a multi-story building, it would be well to have raw material stored on each floor. But where gravity is a factor in process-type operations, it would be well to store on the top floor. Actually, I like to think of storage as not being limited to any one location. To approach a plant-layout problem with a preconceived idea that storage must be in a certain place is only approaching the problem with a closed mind, and that of course is not allowing you the opportunity to plan the layout and building around your product, equipment, and sequence of operations.

Moderator: The greatest majority of plant layout problems have in common the one factor of insufficient space. In what ways may material handling equipment be used to create space?

Panel Member: There are several ways that can be done—primarily either go up or go down. By that I mean when floor space becomes cluttered, think of installing overhead cranes, overhead conveyors, and storage conveyors. Lift trucks or other storage devices also allow space-saving by going up. The other way is to go down—to use underfloor conveyors, chutes, and the like.

Another Panel Member: We could even add "go outside." Some plants find they can save space by routing conveyors away from the congested areas through skids or under overhanging eaves.

Moderator: Frequently, reduced costs of operation involve taking more space. When might this be involved and how can it be reconciled with good plant layout?

Panel Member: There are a lot of cases where it would be more profitable to spread out the layout and use more room in order to put in mechanical handling equipment and get away from more costly types of handling. Spread out, and save handling time and handling costs! Most people believe that plant space is cheap and that material handling equipment is expensive. I think if you investigated it, it is just the other way around. You can afford to use more room if you can prevent workers from rehandling the material—you can afford to load a pallet and let it sit, rather than put the material away on a shelf or set it on the floor and later place the material on the pallet.

Basically this condition holds when the amortization period on equipment is within the return-on-investment period. If occupying more space for a definite period of time will return an over-all profit, considering all factors involved, it is wise to use the extra space. On this basis you can certainly reconcile taking more floor space due to the overall economies in the operation.

Moderator: For transportation of stock between departments, are conveyors better than lift trucks and pallet system?

Panel Member: First, we must have a certain quantity of production before a conveyor becomes justified. Other considerations include the variety of products, the relative bulkiness, the distance to be transported, and the space available. One advantage that a conveyor gives over lift truck, truck-trailer, or similar equipment is the elimination of the human element. Lift trucks are not a long-haul vehicle. At the same time, they cannot move overhead; they must occupy aisle space for the move. My answer would be "generally yes", when volume is sufficient.

Still, there are many cases, where lift trucks must be used. Say we run a large sheet of paper over a printing press and we want only part of it to go on through to other operations—the other part we don't need for four months. But in order to utilize the press capacity we are going to print up all of the sheet. This amounts to an interruption in the flow and a splitting up of part of the product—diversifying the product in its path of flow after printing. In that case, we are better off to put the second part on skids so it can be held aside; after printing, it goes back to its next production operation. The main part of the sheet goes through on the regular conveyor.

Another Panel Member: In the case of steel fabrication, we find it is better to keep lift trucks out of the departments. They take up too much room. We like to use conveyors within the departments and lift trucks between the departments.

Another Panel Member: We shouldn't forget overhead cranes. They generally depend on the weight of the material, the frequency of operations, and the distance moved. We consider the minimum economical distance for an overhead crane as 100 feet, and if we must transport within that 100 feet, then we are not taking full advantage of the crane.

Actually the decision comes back to determining the application and then selecting the most efficient equipment for that application.

Moderator: What evidences might be found in a plant indicating poor planning of plant layout and material handling.

Panel Member: Here are several

that might act as a check list:

a. Crowded conditions
b. Interferences to material movement
c. Poorly utilized space, with machines arranged symetrically for appearance rather than for a minimum of material handling
d. Extensive handling of material by operators or by hand trucks
e. Idle material handling equipment or equipment being used for temporary storage
f. Idle operators
g. High maintenance cost and high breakdown incidence
h. High accident rate

Moderator: In selecting a sit for a new plant expansion, does layout and handling enter the picture?

Panel Member: It certainly does. In building a new plant you are given an opportunity to take a good look at all of your methods, all your material handling, all your various operations. You may never again have such an opportunity in your particular business, so make the most of it while you have the chance.

In determining our location, we faced first the question of multi-or single-story building. After long and serious consideration, we came to the conclusion that in the greeting-card business it does not make any difference. We did not need a railroad siding; we moved raw material by truck. And we wished to add materials at several places throughout our operations. So we are using the hill-side site. By doing so we are able to inject our raw material at ground level on every one of eight floors. That sounds impossible, but it is suprising how little grade it takes to go down one floor. With our hill-side plan we find that the top floor is the largest and our lower floors are the smallest.

Moderator: What are the chief distinctions between a material-handling engineer and a plant-layout engineer?

Panel Member: We have found that a material-handling man should have a good mechanical engineering background. The plant-layout man should be a good methods or industrial engineer.

Moderator: In closing may I add a further comment. For efficient production, good plant layout is essential. And in planning the layout, material movement is a major factor. The best, and certainly the surest way to tie these two elements together is to have the people responsible for both activities report to the same individual in the organization.

CIPM Reports . . .

America Should Substitute Help for Cash in Europe Says Council for International Progress in Management

Anything constructive which Americans can do as a substitute for outright financial assistance to west-European recovery certainly should be vigorously pursued.

This conclusion was reached after attending the Paris Management Conference, April 16-18, 1953, as a member of the MSA-CIPM Seminar team.

I believe that the management seminar program is a highly constructive type of substitute. Bringing European top-management executives into direct contact with enthusiastic, progressive American top-management executives can do much to correct the attitude of the former toward the economic virtues of the competitive productivity process.

A number of European industrial managers, who have attended seminars conducted thus far, apparently have become stalwart believers in the advantages which can accrue through honest and sincere application of scientific and humane management principles. They seem to be striving conscientiously to practice such principles, even within the limitations imposed by socialistic government regulations, deadening industrial cartels and politically-dominated labor unions.

All too few European seminar conferees have been the top men in their enterprises, and so are unable to act as freely as their convictions would have them do.

It was refreshing, at the OEEC Management Conference in Paris during the week of April 19, to witness the spectacle of business and association executives from nine European nations sitting down together, reporting to one another their various efforts to promulgate advanced management practices, and in many instances, acknowledging their deficiencies. It was gratifying, too, to observe the extent to which the management seminar program is receiving the interested attention and sponsorship of the OEEC. The patience and persistence with which OEEC seems to be going about its unification objective, in spite of countless imponderable ramifications, was most impressive and heartening. The United States certainly should lend every reasonable encouragement to this worthy European effort.

The most significant disclosure of the Paris Conference, to my mind, was the openly-expressed need to adjust the deep-rooted attitudes of more and more top executives of European enterprises —large, medium and small. Mr. Vaubel, of the German delegation, expressed it most fittingly as the need to "widen the circle."

I can conceive of no more effective means of reaching European top management, and cultivating its appreciation of the philosophy and practice of "more goods for more people", than through the management-seminar process. I am convinced that American seminar teams, comprised of private enterprisers who are articulate, active, and dynamic managers in their own home industries, can present and illustrate the "Productivity Theme" with much greater sincerity, conviction, and persuasion, than can any other group of Americans — educators and government personnel included.

It is vital, however, that such American teams are afforded the opportunity to work in seminars with top-management Europeans (large, medium and/or small business). Until European top management itself can be persuaded to open its mind to the advantages of productivity in all areas of industrial management activity, there is little to be gained, it seems to me, in developing seminar or training programs for European subordinate management. Once the top manager himself is enlisted, it can reasonably be assumed that he will actively support and promote management-development programs for his management subordinates.

The possibility of recruiting seminar teams, made up of enlightened European top managers, or teams which would be combinations of European and American managers, was discussed at the Paris conference. Certainly such undertakings should be attempted, because no American manager could possibly be as effective with European managers as the enlightened fellow-European manager himself.

More power to the Council for International Progress in Management, therefore, in its efforts to recruit qualified management-seminar teams, and to see that the offerings of such teams reach as large a segment of European top-management as possible.

by LAWRENCE B. MURPHY

The Management Bookshelf . . .

New Book Distills Gilbreth's Nine Volumes Into One Comprehensive Work

by Mrs. Wallace Clark

A devoted pioneer and practitioner of scientific management in Europe has been wringing his hands these past few years over one of our U. S. exports called *productivity*.

There are several other new-fangled management terms, such as *human relations*, that have been giving him forty fits. Not that he objects to new terms or to the extension of knowledge. "But," he complains, "some of your compatriots who come over here seem to think they are bringing something new or even something that they have invented. Why doesn't somebody tell them that for the most part it is just scientific management as it has been known and practiced for the last fifty years."

Well, today there are glad tidings for our unhappy friend. Somebody *is* telling them.

William R. Spriegel, Dean of the College of Business Administration. University of Texas, and Clark E. Myers, Chairman of the Department of Management of that college, "believing that the permanent contribution of the Gilbreths warrants the republication of their major writings," have sat down with nine volumes of those writings, selecting their most vital parts, with emphasis on those "*which recognize the individual*," and have brought these together, logically and expertly into one volume of 500 pages.

In this admirable project, which they seem to have relished, they have had two advantages—consultation with Lilian Gilbreth and some excellent rules which they have set up for themselves:

(a) to include all principles and problems which seem of a permanent nature,

(b) to exclude what was significant only at the time of writing,

(c) to avoid repititions and duplications,

(d) to avoid duplications of their contemporaries' works which can be found in detail in other writings.

The volumes thus expertized include *Field System, 1908; Concrete System, 1908; Bricklaying System, 1909; Motion Study, 1911; The Psychology of Management, 1914; Primer of Scientific Management, 1914; Fatigue Study, 1916; Applied Motion Study, 1917; Motion Study For The Handicapped, 1917.*

The editorial purpose has been "to pay tribute to two great American pioneers in the field of management; to make available to students and teachers valuable writings long out of print and difficult or impossible to obtain; to dispel many mistaken ideas and concepts commonly held concerning the early work in management by showing the recognition of the Gilbreths of the joint relationship of the employer and employee; the importance of feelings, sentiments and emotions in the motivation of workers; the *appropriate* emphasis on methods improvement, that is, the search for 'the one best way' to perform a task as a means of greater production; and to impress readers with the soundness and validity of many ideas from which more recent shifts in emphasis to details and techniques seem to be most common."

Having stated their rules and purposes, the two editors step back and keep themselves out of the way, content to display their evidence—fifty years of it—and let it speak for itself of what they well know is there.

For they have had the vision to look through all of the Gilbreth Scaffolding—therbligs, packet systems, movies, cyclegraphs, penetration screens and the rest of it—and behold the structure that has been emerging and that will endure.

They have had the understanding to grasp the deep motivation and reason of what has been going steadily into it.

And they have had the wisdom to have discerned that the Gilbrethean "one best way" never has had work as its ultimate objective, but that it always has been and will be the one best way to get at the best that is in people and give it the best chance for development.

Dean Spriegel and Professor Myers in this book have rendered important technical assistance to the under-developed areas of management history and also have put into the record for all time that the keystone of the Gilbreths' work and writings is, incontrovertibly, "*recognition of the importance of the individual*".

The Writings of the Gilbreths. *Edited by William R. Spriegel and Clark E. Myers. 500 page. Richard D. Irwin, Incorporated, 1953. $7.50.*

Library of Congress Names Managements Basic Books for DC Chapter Display

The Washington Chapter of the Society for the Advancement of Management at its Spring Conference displayed a unique collection of management literature of the past and present, especially selected for the Conference by two government institutions.

The Past exhibit contained some rare and out-of-print books, was accompanied by a specially-constructed case and a custodian with the only key to the display. The books in the Past display were selected by the Library of Congress.

Management literature of the Present was selected by the Bureau of the Budget, contained a number of modern management books so new they had not yet been catalogued. (The exhibit held space for Future management books—a bare table, with a sign soliciting manuscripts.)

Some statistics brought out by the display: from 1941 through 1950 twice as many basic books were published on management as were published during the previous 30 years; the average recent output of fundamental books in the field of management has been six times more rapid than during the years when the Society's founders lived.

Here are some of the books chosen by the Library of Congress as basic to scientific management:

(*Editor's Note:* It is important to the reader to remember that the books listed in this review of the Washington Chapter's unique display were selected by two separate governmental bureaus and are in no way a selection of The Society.)

1911 - 1920

Robb, Russell ..... *Lectures on Organization*
Taylor, Frederick W. ..... *Shop Management*
Gilbreth, Frank B. ..... *Scientific Management*
Dartmouth College ..... *Discussions of October 1912*
Emerson, Harrington ..... *Principles of Efficiency*
Gantt, Henry L. ..... *Work, Wages, and Profit*
Taylor, Frederick W. ..... *Principles of Scientific Management*
Gantt, Henry L. ..... *Industrial Leadership*
Gilbreth, Frank B. ..... *Motion Study*
Drury, Horace H. ..... *Scientific Management*

1921 - 1930

McKinsey, James O. ..... *Budgetary Control*
Sheldon, Oliver ..... *Philosophy of Management*
Copley, Frank B. ..... *Frederick W. Taylor*
Taylor Society ..... *Scientific Management*

1931 - 1940

Dutton, Henry P. ..... *Principles of Organization*
Tead, Ordway ..... *Personnel Administration*
Alford, Leon P. ..... *Henry Laurence Gantt*
Schell, Erwin H. ..... *Administration Proficiency in Business*
Tead, Ordway ..... *The Art of Leadership*
Baker, John C. ..... *Executive Salaries & Bonus Plan*

1941 - 1950

Davis, Ralph C. ..... *Industrial Organization & Management*
Riegel, John W. ..... *Salary Determination*
Rautenstrauch, Walter ..... *Design of Manufacturing Enterprises*
Glaser, Comstock ..... *Administrative Procedure*
Clark, Wallace ..... *The Gantt Chart*
Lytle, Charles W. ..... *Wage Incentive Methods*
Leffingwell, William H. ..... *Office Management*
Tead, Ordway ..... *Democratic Administration*
Urwick, Lyndall ..... *Making of Scientific Management*
Hempel, Edward H. ..... *Top-Management Planning*
Morrow, Robert L. ..... *Time Study and Motion Economy*
Schell, Erwin H. ..... *Technique of Executive Control*
Halsey, George D. ..... *Handbook of Personnel Management*
Jucius, Michael J. ..... *Personnel Management*
Mooney, James D. ..... *Principles of Organization*
Kimball, Dexter S. ..... *Principles of Industrial Organization*
Pigors, Paul J. W. ..... *Personnel Administration*
Millett, John D. ..... *Principles of Government Planning*
Lansburgh, Richard H. ..... *Industrial Management*
Brown, Alvin ..... *Organization of Industry*
Taylor, Frederick W. ..... *Scientific Management*
Gilbreth, Lillian E. ..... *Manpower Management*
Tootle, Harry K. ..... *Employees Are People*
Barnard, Chester I. ..... *Organization and Management*
Holden, Paul E. ..... *Top-management Organization & Control*
Maynard, Harold B. ..... *Methods-time Measurement*
Knauth, Oswald W. ..... *Managerial Enterprise*
Otis, Jay L. ..... *Job Evaluation*
Hudson, Catheryn ..... *Processes of Organization*
Yoder, Dale ..... *Personnel Management*
Trundle, George T. ..... *Managerial Control*
Fayol, Henri ..... *Industrial Management*
Gardiner, Glenn L. ..... *Foreman's Role in Management*
Goetz, Billy E. ..... *Management Planning*
Loken, Robert de Long ..... *Supervision in Business*

Foundation for Salesmen's Compensation Is Subject of Tosdel-Carson Book

by CHARLES L. LAPP

Salesmen may be stimulated to produce results by various mass means such as sales contests, conventions, meetings, and bulletins, or by personal methods such as office conferences, field contact, or by letters. But not one of these methods will be as important to most salesmen as the method and amount of their compensation.

Professor Tosdal, with the assistance of Professor Carson, in their two volume book, *Salesmen's Compensation* have brought together by means of surveys, case studies, and text material a valuable compendium of information. If an executive reads these books carefully and adopts ideas contained in them to his own business, he will be able to avoid many pitfalls in setting up compensation plans.

Volume I is divided into two parts; Part I being devoted to comprehensive discussion of the Principles and Practices of compensating salesmen. In the opening chapter, the importance of personal selling, the extensiveness, the significance and the recurring difficulty of the compensation problem is emphasized. Chapter II deals with the various duties performed by salesmen and an analysis of the methods for measuring salesmen's performance as basic foundations for a compensation plan. Chapter III discusses the need for arriving at a level of compensation which will neither underpay or overpay a salesman. In Chapter IV through VIII, objectives, components, and types of compensation plans are thoroughly analyzed. In Chapter IX such administrative problems as the installation and operation of compensation plans, reports to salesmen, salesmen complaints, split commissions, house accounts, expense reimbursement and special adjustment problems resulting from territorial transfers are considered. Legal implications, government regulation and controls constitute the final area covered in Part I. An excellent seventeen page Summary and Conclusions chapter follows for those who do not feel they have the time to read all material in both books.

In Part II of Volume I is given the results of a survey of compensation practices of 1,153 companies which was made in cooperation with the National

Sales Executive membership. The survey results presented give an excellent norm for the executive desiring to compare his level of compensation with other companies. If it can be assumed that membership in National Sales Executives represents a sample of more progressive companies, then to that extent the reader cannot rely on the statistics as being representative of any more than the group from which the sample was taken. There is also another point along this line that the reader should consider—did those executives representing only those companies that were more nearly satisfied with their compensation plan reply? The results of the survey should be sufficiently thought-provoking for executives to encourage further study by industry groups through their respective trade associations.

Volume II is comprised entirely of thirty representative case studies based on the actual experience of business firms in evolving compensation plans. At the end of each case is a commentary by the authors which includes useful tentative conclusions drawn from the experience and data presented in the case. These commentaries also include a discussion of the advantages of the plan in use by the company and analyses of problems which may develop if continued use is made of the plan without modifications. The thirty cases were wisely chosen from diversified areas of selling.

The very strength of these books is their comprehensiveness. It is also probably the most important weakness. Most executives do not have the time to read some nine hundred and fifty pages on just one of their many management problems. For such executives if Professor Tosdal would have prepared a checklist of the most important points to be considered in setting up a compensation plan (similar to those often prepared by management consulting firms) his excellent work would have benefited a greater number of executives. Both volumes, however, are well indexed and a reader can quickly find those points of discussion in which he has an interest or feels would be of help to him.

SALESMEN'S COMPENSATION. *By Harry R. Tosdal, assisted by Waller Carson, Jr. Harvard University Graduate Business School of Business Administration. Two Volumes. Vol. I, 493 pages; Vol. II, 461 pages. $11.50.*

THE principal object of management should be to secure the maximum prosperity for the employer, coupled with the maximum prosperity for each employee—F. W. Taylor.

Authors In This Issue . . .

W. V. OWEN, author of the penetrating analysis of the fundamental battleground of today's unions and management (p. 5), the seemingly changeless and timeless pull between opportunity and security, is at present professor of Labor Economics at Purdue University. He is a prolific author, having written many articles dealing with modern labor relations, as well as a text on Labor Problems. Mr. Owen has also been active in the field of management-labor relations, having served both as arbitrator and consultant at various times.

HENRY DREYFUSS, industrial designer (p. 7), got his first commission in 1929 when he was 25, forthwith opened his own office on New York's Fifth Avenue. Devoted himself to the premise that his design had first of all to be used; people individually or in groups had to find his work functional. He developed from this idea a Five Point Formula which over the years brought such commissions as transatlantic liners, farm tractors, oil-field rigs, diesel engines, railroad trains (the famous 20th Century Limited is a Dreyfuss design), safes, alarm clocks, airplane interiors, television sets.

WENDELL M. PATTON, senior associate of Bruce Payne & Associates, was graduated from the University of Georgia, where he took his MA in counselling. His Ph.D. is Purdue, Psychology. He has been a personnel officer in the Air Force, went from there to assistant professorship of Business Administration (Georgia U.) then to Lander in South Carolina, where he finally was head of the Department of Psychology and Education. In 1952 Mr. Patton joined Bruce Payne & Associates, Incorporated. He specializes in personnel attitude and morale surveys (p. 10), personnel placement and evaluation, and personnel counselling and guidance.

CHARLES A. THOMAS, who wrote the special-request article (p. 13) on a group of time-study men, is at present manager of industrial relations and time-study at the Standard Pressed Steel Company at Jenkintown, Pennsylvania. He was graduated from Duke in 1938, has been a supply corps officer in the Navy in World War II. His background in time-study and retail executive work was gained with such firms as Sears, Roebuck & Company, Bendix Aviation, and in association with Phil Carroll, the management consultant, as Mr. Carroll's personal assistant.

JOHN B. JOYNT, manager of the administrative engineering department, American Enka Corporation of New York, brings wide experience to his article on Management Improvement (p. 19). He has been in the armed services, government, industry, education, and management consulting. As well as being a widely-sought speaker, he conducts courses at the Graduate School of New York University. During World War II Mr. Joynt was awarded the Legion of Merit for his service on the Management Control Staff of the Army; he is also the author of a number of articles on management controls.

BILL N. TAYLOR, product of the management profession in the southwest, is president of the International City Managers' Association, elected to serve the 1953 term. His article (p. 23) including the actual form and questions of a questionnaire from management to employees, is the product of experience gleaned from oil companies in Oklahoma, Mexico, Venezuela, from 1920 through 1928. He has been a city manager in Longview, Port Arthur, McAllen, Beaumont, Baytown, Tyler, Wichita Falls, Texas, and in Columbia, Missouri, and in 1941 he was president of the League of Texas Municipalities.

RICHARD MUTHER, who edited the highlights of the interesting symposium (p. 28) in which the Kansas City Chapter discussed plant layout, is associated with the Vendo company of that city, and is an active member of SAM.